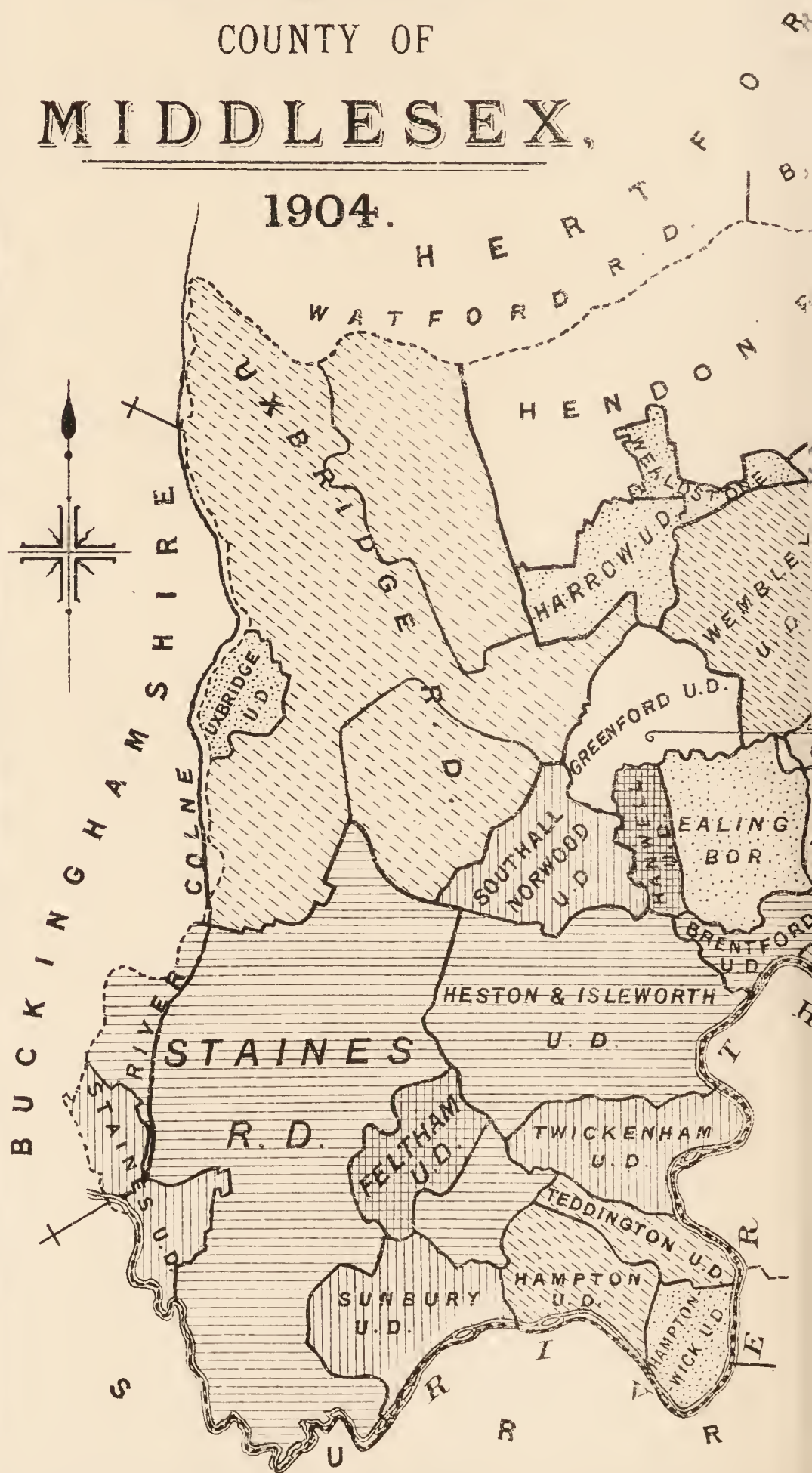


ADMINISTRATIVE
COUNTY OF
MIDDLESEX.

1904.





INFANTILE MORTALITY.

Or proportion of deaths of children under 1 year of age to every 1000 births.

Less than 100
100 and less than 120
120	140	..
140	160	..
160	170	..
200	220	..





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County Council of Middlesex.

ANNUAL REPORT

OF THE

COUNTY MEDICAL OFFICER OF HEALTH

FOR THE

YEAR 1904,

INCLUDING A

SUMMARY OF THE ANNUAL REPORTS OF THE
DISTRICT MEDICAL OFFICERS OF HEALTH.

BY

C. W. F. YOUNG, M.D., D.P.H.,

County Medical Officer of Health.

London:

HARRISON AND SONS, ST. MARTIN'S LANE,
Printers in Ordinary to His Majesty.

1905.

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TO THE COUNTY COUNCIL OF MIDDLESEX.

SIR, MY LORDS AND GENTLEMEN,

I have the honour to present to you my Annual Report on the health of, and the sanitary administration in, the Administrative County of Middlesex during the year 1904.

At the end of the year under review the County contained 36 separate sanitary districts, as compared with 33 in the previous year. This increase is due to the formation into separate urban districts of three parishes, which before formed constituent parts of the rural sanitary districts of Staines and Uxbridge respectively. Two of these new districts did not come into being till towards the end of 1904, and there are no separate reports relating to them. They have consequently been dealt with, for the purpose of this report, as if the parishes still formed part of the respective rural districts up to the end of the year.

The total number of reports received by the Council from district medical officers, therefore, is 34. In all cases but two the Sanitary Authority has had these reports printed. The exceptions are those relating to the public

health of Greenford and of Sunbury. As regards the former, it has not been the custom previously to print the report. The district is but sparsely populated as yet—though not the smallest in the County—and there appears to have been but little to record for the year. But, even under these circumstances, it is desirable that printed copies should be available for those interested in matters of public health. In the case of the urban district of Sunbury, however, the position is entirely different. Firstly, the annual reports of previous years, except that of 1899, have been printed. Secondly, the facts as to the public health of the district during 1904, which are dealt with in detail by the medical officer of health, are more than usually important. Thus the death-rate from all causes—which is the highest in the County—is the highest which has been recorded in the district during the last ten years. Diphtheria, attended by the deaths of many children, was prevalent throughout 1904, and scarlet fever at the end of the year. The difficulties of ensuring adequate isolation of patients, owing to want of space in the houses occupied by the working classes, the absence of hospital accommodation, and the necessity which exists for complete means of disinfection, are referred to, and other important matters are also dealt with. The account given in the report as to these matters, it is true, can hardly be read with satisfaction, and is not calculated to inspire confidence as to the adequacy of the means so far provided in the district with a view to limiting the spread of infectious disease when it appears, but having regard to the importance of such matters, and the difficulties which have to be overcome in deciding as to the course of action which should

be taken, the advantage of having printed copies of the report, available for the individual use of each member of the Local Authority charged with the care of the public health of the community in the district, is obvious, and it is to be hoped that in future years this advantage will again be appreciated by the District Council as it has been in the past.

The majority of the reports were received this year by the end of the month of May, but one did not reach the County Council until June, and one in the early part of July. So long as there is such delay in obtaining copies of the reports of all the districts it is impossible to complete the report for the County at an earlier date than the present, indeed it is a matter of difficulty to finish it before the summer recess.

As regards the report for the County, I have to some extent altered the arrangement adopted in previous years in that matters are dealt with more fully under subject headings, whilst the summary of each district has been reserved for matters not readily lending themselves to this treatment, and for drawing attention to the subjects chiefly dealt with in the district report.

Owing to the fact that the Council has afforded me facilities in obtaining certain additional information relating to the vital statistics of the Administrative County for the last four years, it has been possible to give death-rates corrected as fully as possible, and I have therefore, for the period mentioned, drawn up charts showing the death-rates in diagrammatic form. Details as to the corrections which have thus been made are set out in the section dealing with

deaths, and I need here only refer to the fact that the death-rates obtained after these corrections are made, and after allowing for the influence of the age and sex constitution of the population, compare favourably with those which prevail in England and Wales generally. Further it may be said that the rate of mortality in Middlesex is a low one, and shows a tendency to decrease, although as regards this decrease the period for which corrected figures are available is too short to enable any very definite opinion being yet given. The question arises therefore as to the causes which tend to this result. The fact that a large portion of the County is of a residential character, and occupied by persons the social circumstances of whom have influence favourable to a low rate, doubtless has effect, but it must be remembered that as matter of fact the population of Middlesex has been yearly becoming more and more urban in character, which implies an increased rate of mortality, and that although part of the population may be favourably situated as regards social circumstances, still a not inconsiderable proportion suffers from lack of, or irregularity of, employment, poverty, and its attendant evils, and it cannot be said therefore that the influence which these factors have in increasing or maintaining the death-rate of a community has been absent in the County.

A cause, and I think an important one, which needs to be considered as tending to a low rate in the County is the following. The increase which has taken and is still taking place in the County is a matter chiefly of the last fifteen to twenty years, in other words the development has taken place with the benefit of the knowledge regarding sanitation which has resulted from the services of those who have worked in the field of public health

during the last fifty years—services which at the time are frequently misunderstood, and afterwards are apt to be forgotten.

In the light of this knowledge it has been possible, in the development of the County, to avoid many unhealthy conditions to which older communities have been, and still are, exposed, inasmuch as their complete removal is of necessity a gradual process. With the avoidance of such conditions in the expansion of an area, its new community reaps the benefit from its commencement, and there can be no doubt that this factor has had influence on the rate of mortality of the population of Middlesex.

Finally, it is necessary to allude to the fact that in the year to which this report relates the Council decided, having regard to the administration of the Midwives Act, on the creation of the post of a Medical Officer of Health of the County, and that I took up the duties upon my appointment, in May, 1904. As regards the work which I have been able to do under the Midwives Act, a detailed account will be found under the section dealing with this subject in the first part of this report. As regards other matters, my first duty was to take the opportunity of getting to know the medical officers of health of the constituent authorities comprised in the County, and to this end I called on each of them, and later on, at the expressed wish of many, a meeting of these officers was held. By this means medical officers had the opportunity of becoming known to one another, and of discussing matters with a view to uniformity of procedure and co-ordination of action through out the County. A system of weekly interchange, through the medium of my office, of notifications of infectious disease occurring in

each district was also arranged, and by this means each medical officer of health has knowledge of the incidence of infectious disease in the different parts of the County which is of value to him in connection with the occurrence of cases in his own district.

During the year I have on several occasions been consulted by district medical officers in regard to various matters concerning the public health in which they felt the desirableness of another opinion, whilst on the other hand one and all have ever been ready to oblige me with any information or assistance for which I have asked.

In connection with the work of education in the County, the Education Committee desired me to investigate and report as to the question of medical supervision of school children, but owing to the time taken up in other matters, more especially the personal visiting of midwives under the Midwives Act, I have been prevented from continuing my inquiries, and have not yet been able to do more than carry out certain special matters referred to me by the Committee, or make examination of school children under special circumstances with a view to the prevention of the spread of disease.

I have the honour to be,

SIR, MY LORDS AND GENTLEMEN,

Your obedient Servant,

C. W. F. YOUNG,

County Medical Officer of Health.

GUILDHALL,

WESTMINSTER,

July, 1905.

PART I.

THE COUNTY.

Administrative County of Middlesex.

1904.

AREA. ALTERATIONS IN DISTRICTS. INHABITED HOUSES.

The area of the Administrative County at the date of the last census in 1901 was 148,700 acres, and no change has taken place since that date. This area was in 1901 divided up as follows :—

Urban districts	..	..	88,105 acres.
Rural districts	..	..	60,595 „

During the year 1904 the number of urban districts was increased, and the respective acreages at the end of 1904 were :—

Urban districts	..	..	91,791 acres.
Rural districts	..	..	48,909 „

At the date of the census the number of separate sanitary districts constituting the County was 33, namely, 29 urban districts and 4 rural districts. During the year 1904, to which this report relates, 3 new urban districts were created by confirming Orders of the Local Government Board. They are the urban districts of Feltham, Hayes, and Ruislip-Northwood. The first of these was formed by the separation of the civil parish of Feltham from the rural district of Staines, and the last two by separation of the two civil

parishes of Hayes and Ruislip, respectively, from the rural district of Uxbridge. The orders creating these urban districts came into force on the following dates:—

Feltham on April 1st, 1904.

Hayes }
Ruislip-Northwood } on October 1st, 1904.

The Administrative County therefore, at the end of 1904, consisted of a total of 36 districts, of which two are municipal boroughs (Ealing and Hornsey), 30 are urban districts, and 4 are rural districts.

There are no annual reports for the districts of Hayes and Ruislip-Northwood, medical officers of these not being appointed till January, 1905. For the purposes of this report, therefore, they are regarded as forming part of the rural district of Uxbridge until the end of 1904.

The total number of civil parishes within the County is 60 in number, and the boundaries of each of the two municipal boroughs, and of all the urban districts except Brentford, Greenford, Heston and Isleworth, and Uxbridge are co-terminous with those of the respective civil parishes of the same name. As regards the exceptions mentioned:—

Brentford comprises the parishes of (1) Old Brentford.

(2) New Brentford.

Greenford „ „ (1) Greenford.

(2) Perivale.

(3) Twyford Abbey.

Heston and „ „ (1) Heston.

Isleworth „ „ (2) Isleworth.

Uxbridge „ „ (1) Hillingdon West.

(2) Uxbridge.

The four rural districts comprise 23 civil parishes, as follows:—

Hendon	..	..	..	5 parishes.
South Mimms..	..	..	..	1 parish.
Staines	..	..	..	10 parishes.
Uxbridge	..	..	..	7 parishes.

The following table shows the number of inhabited houses enumerated at each census, 1891 and 1901.

		1891.	1901.
County of Middlesex..	..	95,088	135,431
Urban districts	.. ..	84,667	125,204
Rural districts..	.. ..	10,421	10,227

Although the greater number of medical officers have been able to get the number of houses in occupation at the middle of the year 1904, for the purpose of estimating the population of their respective districts, a few have not succeeded in obtaining this information, and it is not possible to give figures sufficiently approximate of the number of inhabited houses in 1904.

It will be obvious from the above figures that the increase which took place between 1891 and 1901 in the urban districts is in part to be accounted for by the creation of new urban districts from the rural part of the County. The increase (about 4,000) due to this cause is, however, a relatively small proportion of the whole. The increase

which took place during the decade shows the extraordinary rapidity with which the area of the County is being built over, and there is ample evidence in the reports of 1904 that this is being maintained in most parts of the County.

Thus: Dr. Patten writing in regard to Ealing on this point, states that the houses in occupation at Midsummer, 1904 “exceeded by 1,248 those of the previous year at the “same date,” and that during the year 803 houses were passed by the Surveyor’s department.

Dr. Spreat reports that building is in rapid progress in the south-west part of Friern Barnet. In Hanwell and Southall-Norwood new houses are extensively being erected, as also in Harrow and Wealdstone.

Dr. Andrew writes regarding Hendon (urban):—

“There are signs everywhere that considerable
“building operations will shortly take place in
“nearly every quarter of the parish. Various
“estates are being developed, and I fully expect the
“population to rapidly increase.”

Dr. Sydney Kansome states that the increase in population (estimated) since 1903 is the largest on record, and is due to the large number of new houses occupied.

In Tottenham, a large estate is being built upon by the London County Council. Up to the end of the year only few houses were completed and occupied but eventually some 40,000 persons will be housed here.

POPULATION.

The estimated population of the County, including the population in institutions, at the middle of 1904, was 936,966. In computing the vital statistics of the districts, and of the County as a whole, it is, however, necessary to exclude the deaths of persons dying in institutions which do not belong to the County and also to exclude the population of these institutions. For statistical purposes the estimated population of the County is 930,215.

The population of each district in 1901 and 1904 (estimated) is given in the following table :—

		Census 1901.	Estimated middle 1904.	—		Census 1901.	Estimated middle 1904.
URBAN.							
Acton ..	..	37,744	52,358	Kingsbury ..	..	757	791
Brentford ..	..	15,171	15,618	Southall-Norwood ²	..	10,365	15,737
Chiswick ..	..	29,809	32,177	Southgate ..	..	14,993	19,000
Ealing (<i>Borough</i>) ..	..	33,031	43,780	Staines ..	..	6,688	6,856
Edmonton..	..	46,899	53,358 ¹	Sunbury ..	..	4,544	4,580
Enfield ..	..	42,738	49,699	Teddington	..	14,037	16,000
Feltham ..	..	4,534	5,560	Tottenham..	..	102,541	121,279
Finchley ..	..	22,126	25,564	Twickenham	..	20,991	26,000
Friern Barnet ²	..	8,816	9,758	Uxbridge ..	..	8,585	8,919
Greenford ..	..	819	1,092	Wealdstone	..	5,901	8,940
Hampton ..	..	6,813	7,500	Wembley ..	..	4,519	5,200
Hampton Wick	..	2,606	2,606	Willesden ..	..	114,811	134,539
Hanwell ..	..	10,438	18,000	Wood Green	..	34,233	40,930
Harrow ..	..	10,220	12,313	RURAL.			
Hendon ..	..	22,450	24,449 ³	Hendon ..	..	8,647	11,046
Heston and Isleworth	..	30,863	32,630	South Mimms	..	2,671	2,766
Hornsey (<i>Borough</i>)	..	72,056	84,227	Staines ..	..	18,095	18,737
				Uxbridge ..	..	11,058	18,206

¹ Exclusive of population in Edmonton Union Workhouse not belonging to district, and the population in the Strand Union Workhouse and Schools,
² Exclusive of population in London County Lunatic Asylums.
³ Exclusive of population in Cleveland Street (Strand) Asylum, and of non-residents in Workhouse.

The above estimates of population are for the most part based upon the number of inhabited houses multiplied by the average number of persons per house which obtained at the date of the last census subject to any special local information which the medical officer of health of the district possesses. The various rates given in this report are based upon the above population.

The density of population in relation to the area of the County in 1901 was 5·3 persons per acre. In the urban districts taken together it was 8·4 persons per acre; in the rural districts it was less than 1, namely, 0·84 per acre. The districts in which the density was greatest were Tottenham, 34; Willesden, 26; Hornsey, 25; Chiswick, 23; Wood Green, 21; Acton, 16; Brentford, 13; Edmonton, 12; Teddington, 11, and Ealing, 11 persons per acre, respectively. In the remaining urban districts the proportion was less than 10 persons to an acre.

Public Institutions.—The subject of population residing in and of births and deaths occurring in public institutions in the County, but which do not really belong either to the County or to the district in which the institutions are situated has been gone into in previous annual reports. It may be of advantage, however, to state again the method of dealing with the population, births and deaths of such institutions. If the institution be of a kind that its population, or part of its population, cannot rightly be regarded as belonging to the residential population of the County or district, *e.g.*, workhouses, workhouse infirmaries, asylums or hospitals, which receive sick or infirm persons entirely from without the County, or entirely or partly from without the district in which it happens to be

situated, then the population, births or deaths as the case may be, should be excluded either in whole or in part in order to obtain nett results for the district and the County. On the other hand, it is equally necessary to include as regards any district the number of, as well as the deaths and births amongst, its residents in institutions situated beyond the district.

It will probably be useful to set out here a list of institutions the population and the deaths in which need to be considered for the purpose of exclusion, inclusion or distribution in different districts of the County. In the following list I have set out the chief institutions which need to be dealt with in one or other of these ways, and have classified them according to the method in which they should be dealt with.

1. Institutions in the County the population and deaths in which should be *excluded* :—

Strand Union Workhouse	..	situated in Edmonton.
Colney Hatch Lunatic Asylum	„	Friern Barnet.
Hanwell Lunatic Asylum	..	„ Southall-Norwood.
Northern Fever Hospital, M.A.B.	„	„ Southgate.
North-Eastern Fever Hospital, M.A.B., except beds reserved for Tottenham	.. ..	„ Tottenham.

2. Institutions outside the County the deaths in which of Middlesex residents need to be *included*, and distributed to the various districts to which they rightly belong :—

County Lunatic Asylum	situated in Wandsworth.
Barnet Union Workhouse	„ Barnet U.D.
To be distributed to	<div> <div></div> <div> Friern Barnet. Finchley. South Mimms. </div> </div>

Kingston Union Workhouse, situated in Kingston U.D.

To be distributed to {
 Teddington.
 Hampton.
 Hampton Wick.

London Hospitals, situated in London.

Other outside hospitals, *e.g.*, Richmond.

3. Institutions within the County of Middlesex the deaths in which need to be distributed amongst the districts in which the persons previously resided :—

Brentford Union Workhouse, situated in Heston and Isleworth.

To be distributed amongst {
 Acton.
 Brentford.
 Chiswick.
 Ealing.
 Hanwell.
 Greenford.
 Twickenham.
 Heston and Isleworth.

Hendon Union Workhouse, situated in Hendon.

To be distributed amongst {
 Hendon Urban.
 Hendon Rural.
 Kingsbury.
 Harrow.
 Wealdstone.
 Wembley.

Staines Union Workhouse, situated in Staines Rural District.

To be distributed amongst {
 Staines Rural District.
 Sunbury Urban District.
 Staines Urban District.

Uxbridge Union Workhouse, situated in Uxbridge Rural District.

To be distributed amongst { Uxbridge Rural District.
Uxbridge Urban District.
Southall-Norwood District.

Tottenham Hospital, situated in Tottenham.

4. Institutions within the County some of the deaths in which are to be excluded from the County, and others distributed amongst districts in the County :—

Edmonton Union Workhouse, situated in Edmonton.

(a) Exclude those belonging to { Cheshunt U.D.
Waltham Cross U.D.

(b) Distribute remainder amongst { Edmonton.
Hornsey.
Wood Green.
Tottenham.
Southgate.
Enfield.

Enfield Workhouse.

The above list contains the larger institutions which need consideration, but it is probable as regards any one district that the medical officer of health, with his local knowledge, may be able in special circumstances to apply the same methods to other institutions; but on general lines the list given appears to be complete.

It is of course not possible for medical officers to make corrections in the manner set out above unless special arrangement is made in order to get the necessary returns of deaths of residents which occur outside their districts, though there is no difficulty in discarding those which

occur in a district but do not rightly belong to it. With a view to full correction I hope to be able materially to assist medical officers next year. This matter will be referred to again under the subject of Deaths.

BIRTHS.

From the figures given in the annual reports of the local medical officers of health, I find that the births of 26,392 children were registered in the Administrative County of Middlesex during 1904, which gives a birth-rate on the estimated population of 28·3 per 1,000 living. The birth-rates for each of the last four years for England and Wales generally, the Administrative Counties of London and of Middlesex respectively, have been as follows:—

Years.	The County.	England and Wales.	London.
1901	28·4	28·5	29·0
1902	28·5	28·6	28·5
1903	28·6	28·4	28·5
1904	28·3	27·9	27·9

In the following table are set out the number of births and the birth-rates of each of the districts for 1904:—

		Births.	Birth-rate per 1,000.	—	Births.	Birth-rate per 1,000.
URBAN.						
Acton ..	..	1,450	27·6	Kingsbury ..	12	15·1
Brentford ..	..	545	34·8	Southall-Norwood ..	578	36·7
Chiswick ..	..	889	27·6	Southgate ..	441	23·4
Ealing (<i>Borough</i>) ..	..	1,054	24·0	Staines ..	142	20·7
Edmonton ..	..	1,891	35·4	Sunbury ..	145	31·6
Enfield ..	..	1,427	28·7	Teddington ..	391	24·4
Feltham ..	..	145	26·0	Tottenham ..	3,578	29·5
Finchley ..	..	634	24·8	Twickenham ..	723	27·8
Friern Barnet ..	..	296	30·3	Uxbridge ..	261	29·2
Greenford ..	..	24	21·9	Wealdstone ..	265	33·7
Hampton ..	..	233	31·0	Wembley ..	144	27·6
Hampton Wick ..	..	48	18·4	Willesden ..	4,421	32·8
Hanwell ..	..	533	29·6	Wood Green ..	1,161	28·3
Harrow ..	..	277	22·4	RURAL.		
Hendon ..	..	679	27·7	Hendon ..	208	18·8
Heston and Isleworth ..	..	1,057	32·3	South Mimms ..	54	19·5
Hornsey (<i>Borough</i>) ..	..	1,659	19·6	Staines ..	529	28·2
				Uxbridge ..	498	23·5

COUNTY OF MIDDLESEX.

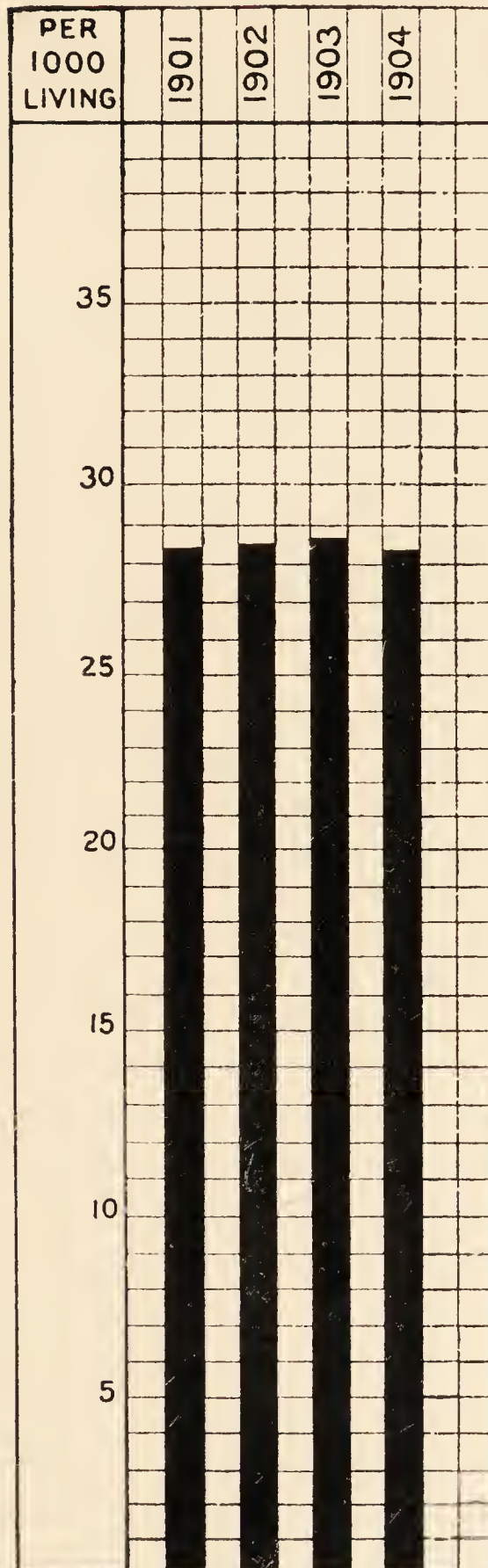


DIAGRAM 1,
SHOWING BIRTH-RATE PER 1,000 PERSONS LIVING.

The birth-rate for England and Wales is the lowest on record. The rate for the County is slightly higher than that for the country generally, but also shows a slight decrease on those of the previous four years.

The highest birth-rates in the several districts, giving them in order, are in Southall-Norwood, Edmonton, Brentford, Wealdstone, Willesden, Heston and Isleworth, Sunbury, Hampton, Friern Barnet, Hanwell, Tottenham, Uxbridge (urban) and Enfield, which are all above the County rate. The most marked instance of a low birth-rate in a district of any size is the case of Hornsey where the rate for 1904 is only 19·6 per 1,000 persons.

Dr. Steegmann in commenting on the birth-rate of Heston and Isleworth draws attention to the probability that it is too high, owing to an under-estimate of population when this is obtained on the Registrar-General's method. He writes:—

“The birth-rate for the year was 32·3. This rate
“is slightly less than the rate for last year, but is
“above the average for the past 10 years. It is,
“however, considerably higher than the probable true
“birth-rate, being calculated on the estimated popula-
“tion and the total number of births registered,
“whether the parents of the children were resident or
“non-resident. Including only the births amongst
“residents, and calculating the rate on the estimated
“population, it becomes 30·4, and if the resident
“births are taken alone and the calculation is based
“on Mr. Baker's estimate of the population, the birth-
“rate is still further reduced to 29·02, a figure which is
“much more likely to be correct than the official one
“of 32·3.”

DEATHS.

The corrected total number of deaths of Middlesex residents during 1904, was 12,199.

Correction for Non-residents and Deaths occurring outside.
—In order to obtain an accurate result as to the deaths which occur amongst the residents of a district during any one year, it is necessary to make correction allowing (1) for residents whose deaths may have taken place outside the district, and which would be registered in the place in which the deaths occurred, and (2) for deaths occurring and registered within the district of persons not really belonging to it. Correction for the latter can readily be made inasmuch as in the returns received by medical officers of health from the local registrars of births and deaths, the previous residence of persons dying in institutions in the district is given, but it is not possible to make the necessary corrections for the deaths of those residents dying outside unless arrangement is specially made for obtaining a list of such deaths. Owing to the proximity of the greater part of Middlesex to the large London Hospitals the need of this correction is an important matter, and the County Council recently decided to obtain for the current year (1905) a return of deaths of residents of the County taking place and recorded elsewhere. This information will be available for the use of the local medical officers of health for their next annual reports.

It was also decided to obtain for the four years since the last census, viz., 1901, 1902, 1903, 1904, the total number of deaths, corrected in the above sense, belonging to the Administrative County as a whole. The latter returns do not contain information as regards the separate sanitary

districts to which the deaths belonged, so it is not possible for these back years to do more than correct the figures for the County as a whole.

The importance of obtaining corrections for deaths occurring outside may be gauged on comparing the *corrected* total number of deaths of residents of Middlesex with the total number of deaths based upon the figures given in the district reports for each of the years 1901–1903. The figures are as follows :—

Year.	Deaths fully corrected.	Deaths recorded partially corrected.	Defect.
1901	10,562	9,845	717
1902	11,675	10,741	934
1903	10,645	9,751	894

The various rates for the County as a whole which are given in this report, as well as the diagrams, are based upon the corrected figures, and inasmuch as correction is only available back to the year 1901, rates are not set out for earlier years.

Correction for age and sex distribution.—In addition to corrections of the above kind, it is necessary, when drawing deductions as to the healthiness or otherwise of a district, or when comparing its death-rate with that of other districts, to have consideration as to the age and sex distribution of its population.

As the late Dr. Farr said as regards age distribution
 “independently of other causes of variation, the mor-
 “tality of different populations will differ according
 “as they consist of numbers in various proportions at
 “the ages at which the mortality is high or low.”

The effect of sex distribution is usually small, though not negligible since females at most age groups have a lower death-rate than males.

In order to allow for the effect on the death-rate of a district of a favourable or unfavourable age and sex constitution of its population as compared with the age and sex constitution of the population of England and Wales generally, it is necessary to multiply the death-rate of the district (after correction has been made by the exclusion of deaths of non-residents, and the inclusion of deaths of residents dying outside the district) by a factor which is obtained in the following way. The mean death-rates of the population of England and Wales during the previous intercensal decade (1891–1900) at certain age groups, male and female, are applied to the corresponding age and sex groups of population existing in the district at the last census. This gives the number of deaths which would have occurred at each group had the mortality been the same as in England and Wales, and their sum gives the total number of deaths for the district on the same hypothesis.

From this hypothetical figure a death-rate for the district is obtained, which is known as the “Standard Death-Rate,” and any difference between this rate and the mean rate for the country as a whole must be due to differences in age and sex constitution. Dividing the mean death-rate for England and Wales by the standard death-rate of the district, a “factor for correction” for the district, is obtained, and the corrected rate is obtained by multiplying the recorded death-rate of the district by this factor.

The factors for each of the districts in Middlesex, for which the age and sex constitution is available, are given in the table below of the death-rates in each district, and it is only necessary to add that the factor for each district is available for use until the date of the next census, as, till after that, we have no knowledge of any changes taking place in the age and sex distribution of the population.

We can now deal with the subject of deaths from all causes. As has already been stated, the deaths belonging to the County which occurred in 1904, after inclusion of deaths registered outside and exclusion of deaths registered within but not belonging to the County, were 12,199. The corrected total in each of the three preceding years was, in

1903	..	..	..	10,645
1902	..	..	..	11,675
1901	..	..	..	10,562

In the following table are given the death-rates per 1,000 persons living for each of these years, after correction for age and sex distribution of the population. The corresponding rates for the adjoining Administrative County of London, and for England and Wales generally are also given:—

Death Rate, All Causes, per 1,000 persons living.			
Year.	The County.	London.	England & Wales.
1901	14·0	18·7	16·9
1902	14·7	18·6	16·2
1903	12·6	16·4	15·4
1904	13·8	17·4	16·2

It will be seen that the death-rates of Middlesex compare favourably with those of London and England and Wales.

In the following table which gives the death-rates per 1,000 persons living for 1904, in each of the separate sanitary districts in the County the death-rates corrected for age and sex distribution are also shown. It has to be stated, however, that it is probable that the *recorded* death-rate has not in each case been fully corrected by the inclusion of outside deaths owing to the fact that complete information as to these has not been available to the local medical officer of health. As has been already stated, information will be available for the purpose of making these corrections for the year 1905.

Subject to the above remarks the death-rates are as follows:—

—			Standard Death- rate.	Factor for Correction for Age and Sex dis- tribution.	Recorded Death- rate 1904.	Corrected Death- rate 1904.
<i>Urban.</i>						
Acton ..	..	..	17·45	1·04240	11·1	11·5
Brentford ..	..	..	17·51	1·03859	16·1	16·7
Chiswick ..	..	..	17·30	1·05174	14·3	15·0
Ealing ..	..	..	17·03	1·06804	11·3	12·0
Edmonton ..	..	..	17·87	1·01785	15·8	16·0
Enfield ..	..	..	17·29	1·05198	12·8	13·4
Feltham ⁽¹⁾	—	—	12·5	—
Finchley ..	..	..	16·81	1·08227	13·2	14·2
Friern Barnet ..	..	..	16·89	1·07740	10·9	11·7
Greenford ..	..	..	19·78	·91932	10·0	9·1
Hampton ..	..	..	17·78	1·02300	13·3	13·6
Hampton Wick ..	..	..	17·71	1·02716	11·5	11·8
Hanwell ..	..	..	16·84	1·08040	11·4	12·3
Harrow ..	..	..	15·71	1·15834	9·2	10·6
Hendon ..	..	..	17·15	1·05063	12·1	12·8
Heston & Isleworth ..	..	..	18·02	1·00977	16·8	16·9
Hornsey ..	..	..	15·97	1·13919	8·2	9·3
Kingsbury ..	..	..	16·91	1·07600	10·1	10·8
Southall-Norwood ..	..	..	17·31	1·05131	12·3	12·9
Southgate ..	..	..	17·40	1·04533	9·0	9·4
Staines ..	..	..	17·50	1·03948	10·2	10·6
Sunbury ..	..	..	18·09	1·00575	19·2	19·3
Teddington ..	..	..	17·37	1·04726	11·5	12·0
Tottenham ..	..	..	16·86	1·07931	12·8 ⁽²⁾	13·8
Twickenham ..	..	..	17·64	1·03123	12·4	12·7
Uxbridge ..	..	..	18·83	·96628	14·3	13·8
Wealdstone ..	..	..	16·07	1·13203	8·7	9·8
Wembley ..	..	..	16·27	1·11846	11·2	12·5
Willesden ..	..	..	17·01	1·06979	12·2	13·0
Wood Green ..	..	..	16·57	1·09801	11·3	12·4
<i>Rural.</i>						
Hendon ..	..	..	16·97	1·07187	7·8	8·2
South Mimms ..	..	..	19·31	·94216	13·3	12·5
Staines ..	..	..	18·38	·99004	17·0	16·8
Uxbridge ..	..	..	18·65	·97576	13·7	13·3
The County ..	..	..	17·23	1·05600	13·1	13·8

(1) Figures for age and sex distribution not available, as this was not a separate district at last census.

(2) Calculated on deaths given by the Registrar-General in his Annual Summary for 1904, in which Tottenham, as one of the big towns, is separately dealt with.

It will be observed that all the factors for correction are above unity, except Uxbridge (urban), South Mimms, Staines (rural) and Uxbridge (rural). In other words, with the exception of the districts mentioned, the age and sex constitution of the respective populations as compared with the age and sex constitution of the population of England and Wales is favourable in producing a low death-rate.

In the case of Feltham and Staines (rural), the populations which I have used for obtaining the rates, include that of certain schools in these districts. This would tend to lower the rates.

The highest death-rates in the County occurred in Sunbury, Heston and Isleworth, Staines (rural), Brentford, Edmonton, Chiswick, and Finchley, giving them in the order of highest to lowest. All these are above the County rate, whilst Tottenham and Uxbridge (urban) have the same rate as the County, namely, 13·8. As regards Heston and Isleworth, it is necessary to point out that the high rate is probably exaggerated owing to an under-estimate of population. Dr. Steegmann states that the method which he has adopted, viz., that of the Registrar-General, “does not make allowance “for an increase (in population) such as has undoubtedly “taken place in this district during recent years, due to the “development of hitherto unoccupied building sites.”

The high rate in Edmonton is no doubt to be accounted for by the fact that the district is largely becoming occupied by the working classes, and Dr. MacFadden in commenting on the rate, says—

“Owing to the regrettable lack of employment that
“has prevailed to such an unusual extent throughout
“the year in Edmonton, poverty has played its

COUNTY OF MIDDLESEX.

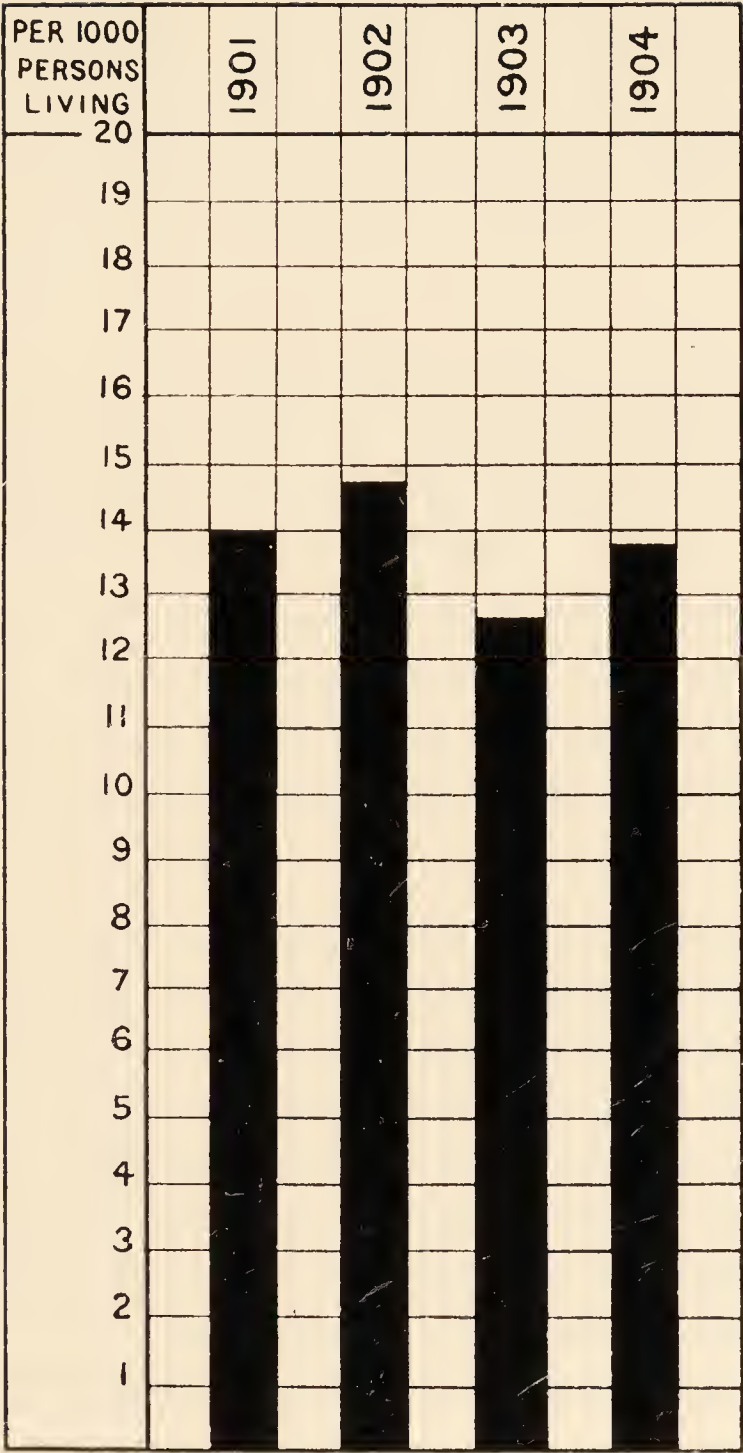


DIAGRAM 2,
 SHOWING DEATH-RATE FROM ALL CAUSES
 PER 1,000 PERSONS LIVING.

ENGLAND AND WALES, 1904=
 16.23 PER 1,000.

“accustomed part as forerunner of sickness and death
“and a not inconsiderable proportion of our increased
“mortality, must, I think, be ascribed to this cause.
“Phthisis and the respiratory diseases show an
“increase that is somewhat significant in this
“connection.”

As regards Sunbury and Staines (rural), which are adjoining districts, the medical officer of health states in the case of the former that it is the highest death-rate which has occurred for the last ten years.

In reference to the high rates in these two districts, it may be stated that in Sunbury diphtheria was prevalent throughout and scarlet fever during the last half of the year. In Staines (rural) there was much scarlet fever towards the end of the year.

It is worthy of note as regards both these districts that there is no isolation hospital accommodation except for smallpox, that there is no efficient means for the disinfection of articles of clothing, that the regulations as to dairies, cowsheds, and milkshops have not been adopted in the district of Sunbury, and that, as regards Staines (rural), the medical officer of health criticises the arrangements which have recently been made in connection with the sanitary inspection of the district in the following words :—

“I recently protested against this arrangement of
“putting this new man under the Surveyor’s control,
“and pointed out to you personally the difficulties of
“the situation and the fact of the great help you have
“already given the Surveyor’s department, whereas
“you have left the Sanitary Inspector’s department
“where it was 20 years ago.”

There is obviously much improvement to be effected in the general sanitary circumstances of both these districts.

In Diagram 2 are set out in diagrammatic form the corrected death-rates for the County as a whole, from all causes, for the last four years. Diagrams 3 and 7 show the death-rates from various diseases.

Causes of Death.—The various causes contributing to the corrected deaths belonging to the County which occurred during 1904 are shown in the following table:—

COUNTY OF MIDDLESEX.

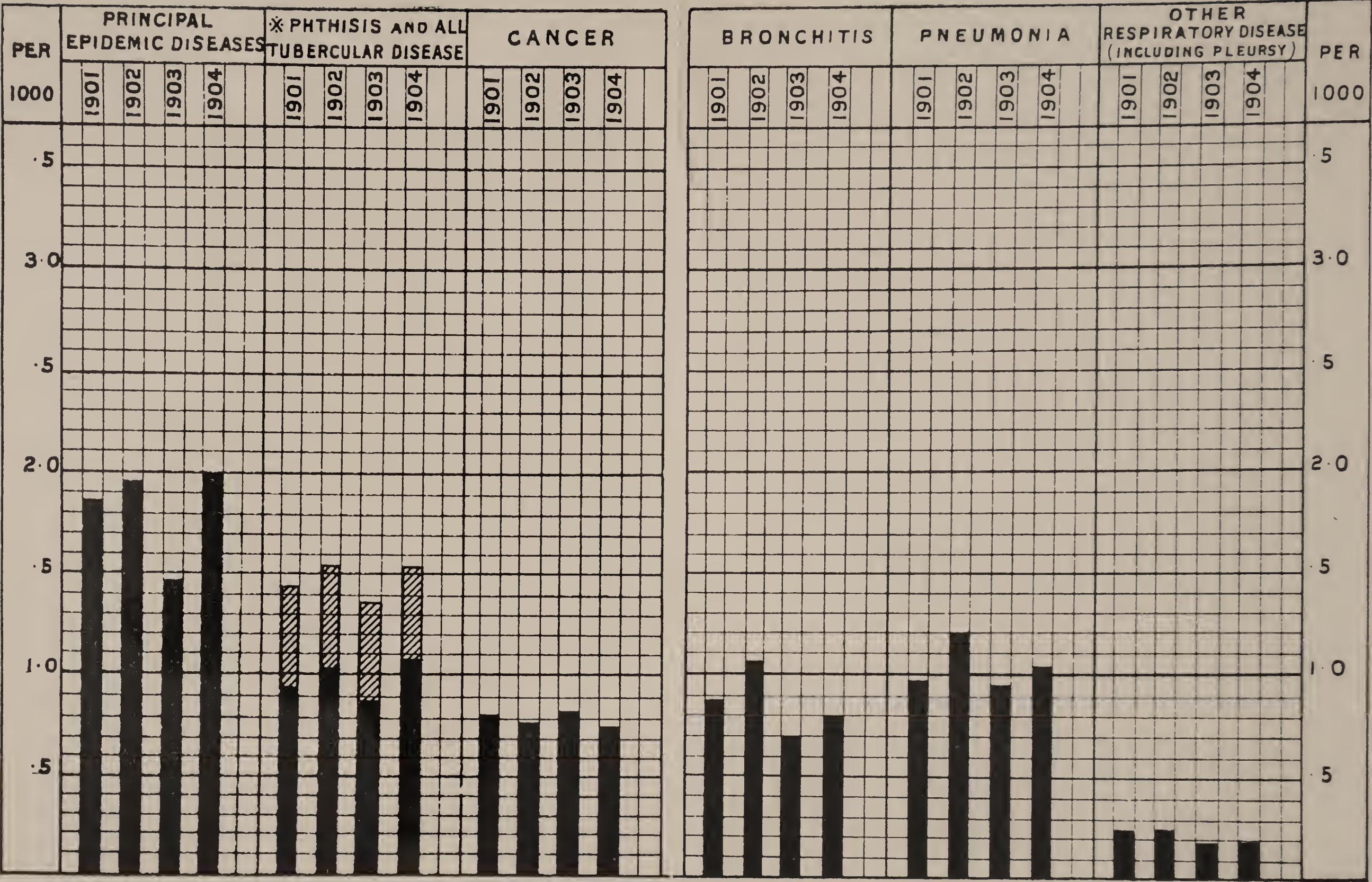


DIAGRAM 3,
SHOWING DEATH-RATES PER 1,000 PERSONS LIVING FROM
CERTAIN DISEASES.

* Black column represents Phthisis or Pulmonary Consumption.
Hatched column represents all Deaths from Tubercular Disease.

*Analysis of Deaths belonging to the Administrative County
of Middlesex, 1904.*

CAUSE OF DEATH.	0—	1—	5—	15—	25—	65 and up- wards.	All Ages.
Smallpox	—	—	—	—	1	—	1
Measles	72	233	20	—	1	—	331
Scarlet Fever	—	23	19	1	1	—	44
Whooping Cough	87	81	4	—	—	—	172
Diphtheria and Memb. Croup	3	85	51	—	—	—	139
Croup	—	8	2	—	—	—	10
Typhus	—	—	—	—	—	—	—
Enteric Fever	—	1	9	10	26	—	46
Continued Fever	1	—	—	—	—	—	1
Epidemic Influenza	19	16	2	8	57	54	156
Cholera	—	—	—	—	—	—	—
Plague	—	—	—	—	—	—	—
Diarrhœa	922	141	2	—	19	44	1,128
Enteritis	190	30	27	25	34	17	323
Puerperal Fever	—	—	—	8	38	—	46
Erysipelas	13	1	—	2	15	11	42
Other Septic Diseases	5	1	3	4	26	6	45
Phthisis	11	33	40	176	696	37	993
Other Tubercular Diseases	163	134	65	23	39	11	435
Cancer	—	4	4	9	433	262	712
Bronchitis	203	93	7	2	107	338	750
Pneumonia	268	238	32	27	252	144	961
Pleurisy	3	4	2	4	16	4	33
Other Respiratory Diseases	26	18	8	9	49	43	153
Alcoholism and Cirrhosis of Liver	—	—	—	—	142	19	161
Venereal Diseases	18	—	—	—	6	—	24
Premature Birth	535	—	—	—	—	—	535
Childbirth	—	—	—	4	30	—	34
Heart Disease	12	9	32	32	717	715	1,517
Accident	88	34	31	22	119	30	324
Suicide	—	—	—	7	63	8	71
Other causes	963	176	109	91	694	972	3,005
All causes	3,602	1,368	469	464	3,581	2,715	12,199

to methods of feeding, where the child is being brought up by hand, and as to cleanliness of children, and of tenements and their surroundings.

This is work which can only be adequately performed by women, and it is therefore a matter of satisfaction that many of the Sanitary Authorities in the County have recognised this and have appointed female inspectors. Thus women inspectors are employed in Acton, Edmonton, Tottenham, and Willesden. In several districts leaflets with instructions as to the feeding and rearing of infants have been printed, and through the agency of the local Registrars of Births and Deaths these are distributed to the parents when the birth is registered. The difficulty of bringing up infants by hand is often increased owing to the fact that the mother has to go out to work and leave her child to the care of others, very often to one of her older children. Dr. Simpson of Acton and Dr. Hope of Hanwell, in referring to this subject, express the opinion that the establishment of crèches would be of great use in dealing with the difficulty. Dr. Steegmann makes some suggestive remarks in explanation of the much greater number of deaths of infants from enteritis during the month of August.

The death-rates per 1,000 births of children under one year of age in each of the separate districts are as follows:—

	Death- rate per 1,000 Births.	Births.	Deaths.		Death- rate per 1,000 Births.	Births.	Deaths.
URBAN.							
Acton ..	142	1,450	207	Kingsbury ..	76	12	1
Brentford ..	165	545	90	Southall-Norwood ..	147	578	85
Chiswick ..	124	889	111	Southgate ..	81	441	36
Ealing (<i>Borough</i>) ..	105	1,054	111	Staines ..	147	142	21
Edmonton ..	161	1,891	306	Sunbury ..	158	145	23
Enfield ..	158	1,427	226	Teddington ..	133	391	52
Feltham ..	213	145	31	Tottenham ..	138	3,578	494
Finchley ..	137	634	87	Twickenham ..	150	723	109
Friern Barnet ..	108	296	32	Uxbridge ..	111	261	29
Greenford ..	208	24	5	Wealdstone ..	113	265	30
Hampton ..	137	233	32	Wembley ..	125	144	18
Hampton Wick ..	194	48	5	Willesden..	110	4,421	487
Hanwell ..	210	533	112	Wood Green ..	125	1,161	145
Harrow ..	108	277	30	RURAL.			
Hendon ..	157	679	96	Hendon ..	91	203	19
Heston and Isleworth ..	169	1,057	179	South Mimms ..	148	54	8
Horrsey (<i>Borough</i>) ..	86	1,659	145	Staines ..	164	529	87
				Uxbridge ..	130	493	65

The figures are not sufficiently large in all cases for the purpose of a reliable rate.

Acton.—Dr. Simpson writes as follows as to the action taken by the Public Health Department, with a view to prevent infant mortality:—

“ House to house visitation and instruction to
“ mothers; the time chosen has to be when the
“ women are most likely to be found at home.

“ Free distribution of leaflets on summer diarrhœa,
“ showing the importance of boiling milk and water,
“ and in keeping the food covered over so as to avoid
“ contamination by dust and flies.

“ The frequent removal of all refuse, especially
“ vegetable matter, which we recommend to be
“ burnt.

“ We lay stress on the importance of keeping the
“ roads frequently watered, so as to lay the dust.
“ (Micro-organisms adhere to moist surfaces.)

“ And we want no better evidence of the value of
“ this measure than the infant mortality of 1903,
“ which, owing to the heavy rainfall, was the lowest
“ on record.

“ The personal inspection and supervision of all
“ dairies and milkshops, and insisting on the milk
“ standing in the open shop being covered over with
“ damp cloth or metal cover.

“ Every mother is given a leaflet showing the best
“ food for her infant, and how that food should be
“ prepared in the event of her not being able to nurse
“ the child herself.

“ There is no doubt that the establishment of a
“ crèche would remove one of the most important
“ predisposing causes, and it is very unfortunate that

“ the measure for providing the same which came
“ before Parliament in the Acton Improvement Act
“ was lost. Much good can be done by education,
“ and there is some slight evidence by the diminished
“ infant mortality in the last four years, that the
“ labours of the Health Department are not in vain.

“ During the year Miss Bulkeley Williams, the
“ health visitor, paid 1,292 visits relating to the
“ feeding of infants, and also had 120 dirty premises
“ cleaned.”

Edmonton.—Dr. MacFadden, referring to a special report which he presented on the subject of summer diarrhoea, which accounts for a large number of the deaths of infants, goes on to say as regards infantile mortality:—

“ The question is one that rests so much with the
“ knowledge and capacity of the mother on the
“ subject of infant rearing and domestic hygiene
“ in general, that it is to her better education in these
“ matters we must look, in the future, for any
“ substantial reduction in the infant mortality. There
“ is no age too young at which to begin the training
“ of girls in these, the most serious and important
“ duties of their lives.”

He expresses the hope, now that the sanitary authority has become also the education authority that steps will be taken to provide instruction in this matter. During the year a female sanitary inspector was appointed, and she devotes much of her time to visiting houses where children are born, with a view to giving instructions as regards them.

Heston and Islewcrth.—Dr. Steegmann having expressed the opinion that a very great number of

“fatal cases of diarrhoea in infants are due to bad
“feeding, dirty conditions, and the ignorance of
“mothers,”

proceeds as follows:—

“The 51 deaths from enteritis were registered
“during the three months of July, August and
“September, but a larger number occurred in August
“than in either of the other two months. Whether
“or not this fact has any connection with the closing
“of the Schools for the vacation, I am not in a
“position to say, but it is one worth considering. In
“many families the girl who is attending school is at
“the same time acting as nurse to the baby at home
“out of school hours, and during the holidays the
“entire care of the infant may be entrusted to her,
“and if the ignorance of a mother as to the proper
“diet for a young baby is great, that of a girl of 12
“or 13 is still greater. It seems not unreasonable to
“believe that some definite system of training the
“elder girls in the schools in hygiene generally and
“the care, management and feeding of babies in
“particular might have a material bearing in the
“future on the health of the infant population and
“the reduction of the number of deaths amongst
“them.”

The rate of infant mortality given for this district is the highest on record except during the year 1898, and the subject was specially commented on by Dr. Steegmann in his third quarterly report for 1904, and it is stated that:—

“As a result of this report, the Council appointed a Sub-Committee to consider the whole question of infantile mortality in the district, and a special report is being prepared by the instruction of this Sub-Committee.”

Southall-Norwood.—Dr. Windle in some interesting remarks on the subject, points out that whereas the general death-rate and death-rate from preventible diseases has declined in the district during recent years this has not been the case as regards infantile mortality. He proceeds:—

“I venture to think that the principal cause lies in the domestic and personal circumstances of particular families, for, so far as Municipal Sanitation is concerned, there is no difference between the families that rear all, or nearly all their children, and others in which the mortality is excessive. In this connection the registered causes of death furnish some evidence. The total number of deaths was 85, 20 of these were the result of premature birth and congenital defects; a consideration of the causes of which would entail many social and personal problems. Diseases the result of improper food and method of feeding, which arise from the inexperience and neglect of mothers claim the chief place. Over one

“half of the total deaths was due to causes
 “dependent upon digestive diseases which are almost
 “invariably the result of improper methods of artificial
 “feeding.

.

“The remedy in a great measure is a matter of
 “education. The teaching of hygiene in the Public
 “Elementary Schools will do much in the future to
 “diminish the rate of infantile mortality by instructing
 “the future mothers on the care, management and
 “feeding of infants.”

Tottenham.—As regards this district, Dr. Butler-Hogan states a serious epidemic of infantile diarrhœa occurred in the third quarter of the year causing 145 deaths, and writing as to the causes favouring the disease, he expresses the opinion that a chief one is the ignorance of mothers and others as to proper methods of feeding children. Secondly, he lays stress on climatic conditions, an influence to which attention was drawn some years ago by the late Dr. Ballard, and states that:—

“In any summer during which the mean tempera-
 “ture of the air amounts to 60 degrees and upwards,
 “and the mean ground temperature (4 ft.) reaches
 “57 degrees, the rainfall being at the same time less
 “than 5 inches,”

a high death-rate from summer diarrhœa may be expected.

Thirdly, the agency of flies in carrying infection is mentioned as a contributory cause.

Wealdstone.—Dr. Butler states—

“There has been a gradual but satisfactory fall in
“this rate; which nine years ago stood at 163 per
“1,000 births. This seems to point to more know-
“ledge and care on the part of those responsible for
“the bringing up of young children.”

Wembley.—Dr. Goddard writes that out of a total of 59 deaths registered, 18 were those of infants under one year, and adds—

“This infantile death-rate is becoming one of the
“most serious of health problems, implying as it does
“an almost complete failure of our present method of
“the rearing of infants, especially among the working
“class.”

He refers to the difficulties of maternal nursing and failure to provide a proper food substitute, partly no doubt owing to neglect and intemperance, but chiefly owing to ignorance, and he suggests that directions as to feeding should be issued by the Sanitary Authority through the medium of the Registrar of Births and Deaths.

Willesden.—Dr. William Butler is in the satisfactory position of being able to report a well marked reduction in the infantile mortality rate of his district. In 1903, which was a year marked by a low rate throughout the country, the infantile mortality in Willesden was the lowest recorded up to that time, namely 123 deaths in every 1,000 children born, but in 1904 there was a further reduction to 115. I think there can be little doubt that this is largely due to the system in vogue in this district of having visits

made to each house where a birth occurs by the lady health visitors in the service of the District Council. By this means instructions are given to mothers as to feeding, rearing, and the care of their children, and many cases of illness are thus prevented. Notwithstanding this, however, it is pointed out that a large number of deaths of infants from diarrhœa occurred, and figures are given showing that the mortality falls chiefly on those brought up entirely or partly by hand. Thus it is found that of children who were still alive at the end of one year of age, 71·1 per cent. were breast fed, and 28·9 per cent. were hand fed entirely or in part; whilst of children who died from diarrhœa before completing one year 11·4 per cent. were breast fed, and 88·6 per cent. were hand fed entirely or in part. Attention is drawn to the risks which are associated with the food supply of the latter class of children owing to the existing conditions of the milk supply.

The districts of *Feltham, Sunbury and Staines (rural)* show some of the highest rates of any districts in the County. It is true that the figures on which they are based are small and for this reason too much reliability must not be placed upon them. These three districts are all adjacent to each other and form a large area in the south-west part of Middlesex and objection to the above rates on the score of the smallness of the figures of each of the districts taken separately may be obviated by calculating a rate for the three districts taken as a whole. If this be done the infantile mortality rate is 172 per 1,000 births which is too high a rate for a district of a rural character.

COUNTY OF MIDDLESEX.

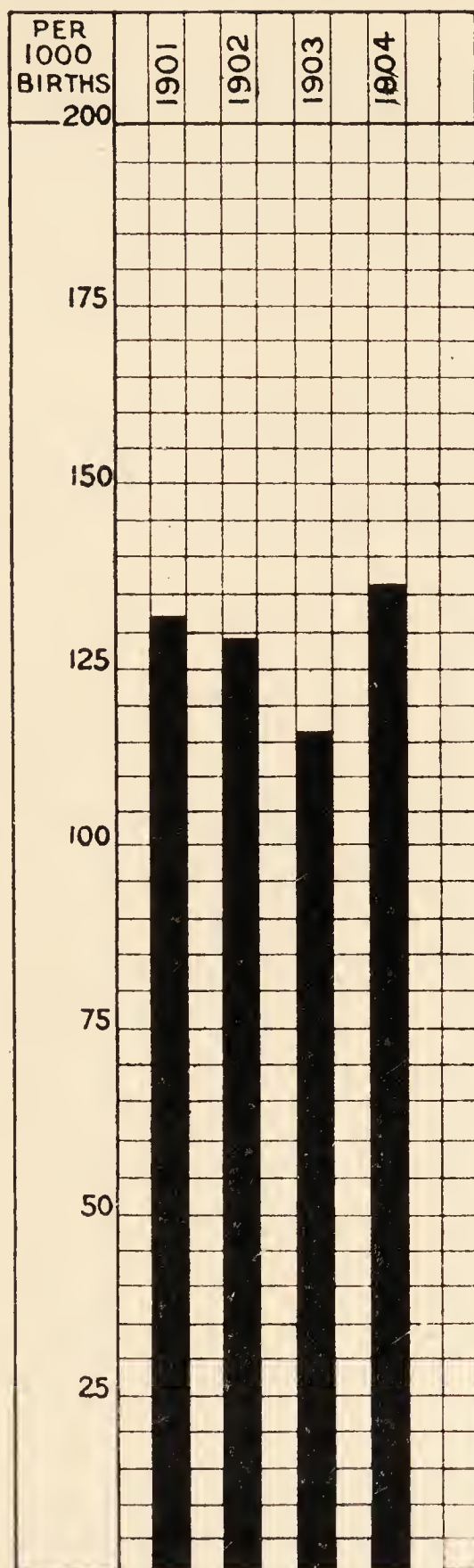


DIAGRAM 4,
 SHOWING INFANTILE MORTALITY,
 or proportion of Deaths under 1 year, per 1,000 Births,
 ENGLAND AND WALES, 1904=
 146 PER 1,000 BIRTHS,

On examining the causes which contributed to these high rates I find that in Feltham 7 out of 23 deaths ; in Sunbury, 7 out of 31 deaths ; and in Staines (rural), 28 out of 87 deaths, or a total of 42 deaths out of 141 deaths of infants were due to diarrhoea and enteritis.

This matter is worthy of the serious consideration of the sanitary authorities which have charge of the public health of the three districts of Feltham, Sunbury and Staines (rural).

PRINCIPAL EPIDEMIC DISEASES.

The diseases which are taken by the Registrar General for the purpose of obtaining this death-rate are—smallpox, measles, scarlet fever, diphtheria, whooping cough, “fever” (typhus, typhoid and continued), and epidemic diarrhoea. This is usually known as the zymotic death-rate. The rate may of course be increased in any one year by an epidemic of one or other of the included diseases, but it may safely be said that apart from any such epidemic the cause which has a marked effect in maintaining the death-rate year after year is the number of deaths from diarrhoea which largely consist of deaths of infants from this disease during the summer months.

The last mentioned deaths have already been dealt with in connection with the subject of infantile mortality.

The death-rates per 1,000 persons living from these seven epidemic diseases for the last four years in the

County as a whole (corrected) are set out in the following table together with the corresponding rates in England and Wales and the adjoining County of London :—

—	The County.	London.	England & Wales.
1901	1·87	2·25	2·05
1902	1·96	2·23	1·64
1903	1·47	1·77	1·46
1904	2·00	2·18	1·94

The following table shows the death-rates from the seven chief epidemic diseases for 1904 in each of the districts. The rates are per 1,000 persons living.

Urban.

Acton	2·2	Kingsbury ..	—
Brentford ..	4·4	Southall-Norwood	1·9
Chiswick ..	2·8	Southgate ..	0·7
Ealing	1·5	Staines	0·4
Edmonton ..	3·8	Sunbury	5·6
Enfield	3·5	Teddington ..	1·3
Feltham	2·1	Tottenham ..	1·9
Finchley	1·7	Twickenham ..	1·8
Friern-Barnet..	2·3	Uxbridge	1·3
Greenford	—	Wealdstone ..	1·0
Hampton	2·2	Wembley	1·9
Hampton Wick	0·3	Willesden	1·7
Hanwell	2·4	Wood Green ..	2·4
Harrow	0·7		

Rural.

Hendon	1·9	Hendon	0·1
Heston and		South Mimms ..	1·0
Isleworth ..	2·4	Staines	1·2
Hornsey	0·8	Uxbridge	1·6

Details as to the actual number of deaths from each of the seven diseases in each district, as given in the local reports, will be found in the tables at the end of the report.

As will be noticed from the last table, the districts in which the highest rates obtained are Sunbury and Brentford. In the former it is largely due to the prevalence of diphtheria, and further reference to this matter will be found under the Section dealing with diphtheria. In the latter to measles and diarrhoea. In the other districts with high rates diarrhoea appears chiefly to have had influence.

In Diagram 3 the death rates from the seven chief epidemic diseases for the County as a whole are set out. They relate to the last four years for which corrected returns of deaths have been obtained.

NOTIFIABLE INFECTIOUS DISEASE.

Under the Infectious Disease (Notification) Act, 1899, which came into force on January 1st, 1900, the notification of certain scheduled diseases became compulsorily notifiable in all parts of England and Wales. Previous to that date the notification of these diseases under the Act of 1889, depended upon whether the local authority adopted the Act or not. The diseases which are compulsorily notifiable are smallpox, cholera, diphtheria, membranous croup, erysipelas, scarlet fever or scarlatina, and the fevers known as typhus, typhoid or enteric, relapsing, continued and puerperal. In addition to this, a local authority has the power to add to the above list any other infectious disease, by a resolution passed at a meeting of such authority of

which fourteen clear days' notice has been given. In the County of Middlesex measles and whooping cough have in the past been added by some of the authorities, but notification of these complaints has been discontinued except in the district of Hampton, where measles is still a notifiable disease. At the time of the recent outbreak of smallpox, chicken-pox was temporarily made notifiable in a large number of the districts, with a view to having inquiry made into such cases, especially in the case of adults, so as to minimise the risk arising from the possible mistake of diagnosing a mild case of smallpox as one of chicken-pox. With the diminution of cases of smallpox, the compulsory notification of chicken-pox has been discontinued, but during the year 1904 it was in force in the following districts, viz.:—

Acton	Harrow
Brentford	Uxbridge Urban
Chiswick	Wealdstone.
Hanwell	

During 1904 the total number of cases of infectious disease notified, exclusive of chicken-pox and measles, was 5,389. The notifications of each disease in the county as a whole were :—

Small-pox	..	59	Enteric Fever	..	302
Scarlet Fever	..	2,827	Continued Fever..		1
Diphtheria	..	1,465	Typhus	..	0
Membranous Croup		18	Puerperal Fever	..	56
Erysipelas			..		661

In Diagram 5 are set out in diagrammatic form the notifications in the County per 1,000 persons living for each of the last four years, whilst Diagram 6 shows the case mortality per cent. of the same diseases.

SMALLPOX.

The number of cases of smallpox notified in the County during 1904 was 59.

The cases in previous years were 115 in 1903, 1,711 in 1902, 157 in 1901, 5 in 1900, 14 in 1899, 2 in 1898, and 3 in 1899.

In the following table are given the case rate, death-rate and mortality per cent. of cases, for each of the last four years:—

Year.	Case rate per 1,000 living.	Case mortality per cent.	Death-rate per 10,000 living.
1901	0·17	13·1	0·22
1902	2·05	16·5	3·39
1903	0·13	3·4	0·04
1904	0·06	1·7	*

* In 1904 there was one death from the disease.

The case rate, case-mortality rate and death-rate of smallpox are set out in graphic form in Diagrams 5, 6, and 7.

The cases occurred in the following districts:—

Acton ..	..	1	Tottenham ..	22
Brentford ..	..	12	Wealdstone ..	1
Edmonton ..	..	4	Wembley ..	1
Enfield ..	..	1	Willesden ..	12
Harrow ..	..	1	South Mimms ..	1
Uxendon (urban)	2		Staines (rural) ..	1

No cases are recorded in the reports relating to the remaining districts

Details are given in the reports of the district medical officers of health in connection with the above cases.

Brentford.—Dr. Bott gives an account in reference to a group of 7 cases which occurred between the beginning of the year and January 10th. The first case was a male patient aged 24, whose illness was first diagnosed as chicken-pox. This was followed by 6 other cases as regards which the account shows that they had all had contact with one or other of the cases. The patients were relations, and it being Christmas-time they had visited one another. The cases were removed to South Mimms Hospital, and the contacts were sent to one of the Isolation Hospitals in the district—which was emptied and disinfected for the purpose—and retained here for 14 days. Two of the patients were employed, the one at the gas-works and the other at a brewery, and at both these revaccination of all the employees was carried out.

Edmonton.—Dr. MacFadden gives the following particulars:—

“ During the year, 4 cases of smallpox were
“ notified. Each case was a separate and distinct
“ importation of the disease into the district, and in no
“ instance did a secondary case arise.

“ In each instance there was a varying number of
“ contacts who were immediately placed under close
“ personal observation until the period of incubation
“ was safely passed. With one or two exceptions

“ these contacts were either vaccinated or re-
“ vaccinated within a few hours of the notification
“ of the case, and to this fact and to the prompt and
“ thorough way in which my staff carried out the
“ removal of patients to hospital, and the disinfection
“ of the infected houses, are, I think, to be ascribed
“ the entire absence of secondary cases.

“ The very mildness of the disease created a
“ situation of considerable gravity in regard to
“ contacts. Two of the cases . . . travelled to
“ and from their work in London by train during the
“ early stages of their illness. Their condition was
“ fortunately recognized before the most infectious
“ period was reached, and, so far as I could discover,
“ they did not cause any secondary cases amongst
“ their fellow travellers. The point suggests, however,
“ a possible means of spreading the disease that
“ would have a very far-reaching effect in districts
“ such as ours, where workmen make long journeys
“ to and from their work daily, in more or less crowded
“ trains.

“ In addition to the contacts arising out of the
“ cases of smallpox that occurred in Edmonton, a
“ considerable number of persons were notified to me,
“ from time to time, by neighbouring medical officers,
“ as having been in contact with cases of the disease
“ in their districts. These contacts were all visited
“ by me and kept under observation until the danger
“ of their taking the disease had passed. In the
“ majority of cases they were revaccinated without
“ delay. None of them developed smallpox.”

Hendon (urban).—Dr. Andrew gives the following particulars as regards the two cases notified to him:—

“An elderly lady was taken ill on November 16th,
“and a rash appeared on November 20th. The case
“was immediately treated as a case of smallpox;
“but as the lady had never left the house for over
“a month except to go to church, the probable
“cause seemed very remote. The only other occu-
“pants of the house were her son and daughter. A
“charwoman had been in a week previous to the
“illness. Three weeks afterwards, namely, Decem-
“ber 9th, the daughter was taken ill and developed
“undoubted smallpox, and was removed to hospital.
“I ascertained that the daughter had stayed with a
“relative in Leeds, where there had been a few
“scattered cases. It is possible she may have carried
“the contagion to her mother, and then became
“infected from her mother. The son had been
“nowhere where it was probable that he could have
“brought it. One other source suggested itself to
“me: I learned that the mother had received
“a letter from Dublin saying that her nephew, who
“was 19 years of age, was recovering from chicken-
“pox. It is somewhat unusual to contract this
“disease at this age, and it suggested itself to me
“that it might have been smallpox.”

Tottenham.—As regards the 22 cases in this district the medical officer reports:—

“Three distinct outbreaks of the disease occurred
“during the year, the first on New Year’s Day, the
“second in March, and the third in August; 22 persons

“in all were affected, and of these 12 had never
“been vaccinated, and of the remaining 10 not one had
“been vaccinated within 20 years.”

The first batch of cases consisted of 11 in all, and evidence was obtained that they had all been in contact with an infected person. They occurred between January 1st and 27th.

The second batch consisted of 9 cases between March 11th and April 20th.

The remaining two cases occurred, the one in June in the person of a man who belonged to and contracted the disease in another parish, and the other a man who is supposed to have contracted the disease from contact with a tramp.

Wealdstone.—The case notified in this district occurred in July, and was a man engaged as a haymaker, who is stated to have been wandering about for some days with the eruption out on him, until he finally applied to the relieving officer at Wealdstone for medical relief.

Wembley.—Dr. Goddard reports :—

“The smallpox case occurred at the Sudbury Girls’
“Home in the middle of July; the infection appears
“to have been received early in the month when the
“patient was in London for the day. No time was
“lost in isolating by sending her to the hospital
“cottage at Alperton.”

Willesden.—An interesting account of a localized outbreak here is given by Dr. Butler :—

“A man, a Salvation Army ‘Captain,’ arrived
“in Willesden on September 29th, who had visited
“shortly before a sick friend at Horbury, Yorkshire.
“On October 18th the Medical Officer of Horbury
“telegraphed stating that this patient’s illness had
“proved to be smallpox, and giving the address in
“Willesden at which the ‘Captain’ was. On inquiry,
“it was found he had been laid up with influenza from
“October 2nd–16th. His wife, in the meantime, had
“returned to Horbury and was admitted to hospital
“there on the 18th with smallpox. In view of this
“fact there could be no doubt that her husband’s
“illness had been smallpox. Between October
“19th–22nd, 7 persons in the same road developed
“symptoms of influenza which proved to be smallpox.
“In all, 14 persons were known to have been in
“contact with one or other of these cases and 5
“of these developed smallpox.”

VACCINATION.

Some of the medical officers give information as to the state of vaccination of their districts. It would be useful if this could be given in each case.

Edmonton.—Dr. MacFadden reports that the primary vaccinations for the year were 1,120 as compared with 1,891 births registered, or 59 per cent., and comments on the danger of so great a proportion of unvaccinated children.

Hanwell.—In this district there were 533 births. The number of infants successfully vaccinated by the Public Vaccinator is stated to be 493.

Hendon (urban) and Willesden.—The following particulars are given:—

			Hendon.	Willesden.
Number of births	..	..	660	4,375
Successfully vaccinated	..	..	559	2,695
Insusceptible	..	..	4	19
Conscientious objection certificates	..	..	38	100
Died unvaccinated	..	..	45	308
Removed, or vaccination postponed	..	..	14	411

The following table, the figures for which are obtained from the Report of the Medical Officer of the Local Government Board, shows the returns as to vaccination in the Registration County of Middlesex and in the Unions, also the returns for England and Wales.

The figures are for the year 1901, the latest available.

Per cent. of Births Registered 1901.

Unions.	Successfully vaccinated.	Exempted by Conscientious Objection Certificates.	Not finally accounted for including cases postponed.
Brentford	77·5	0·6	11·8
Edmonton	66·3	1·6	22·5
Hendon	84·1	3·5	4·7
Staines	81·8	0·8	7·7
Uxbridge	83·0	3·1	4·5
Willesden	70·5	2·8	17·2
Middlesex	72·3	1·7	16·4
England and Wales	71·4	4·3	13·0

The remainder in each case is made up of children who are returned as having died unvaccinated, having contracted smallpox, or as being insusceptible to vaccination.

CHICKEN-POX.

This disease was made temporarily notifiable in a large number of districts during the prevalence of smallpox. During the year 603 notifications were received in the following :—

Acton ..	262	Harrow ..	7
Brentford..	58	Uxbridge (urban)	85
Chiswick ..	112	Wealdstone ..	4
Hanwell ..	73	South Mimms..	2

In the case of Willesden the disease was not notifiable, but information was received from the public elementary schools, and enquiry at the homes was made in 364 cases.

SCARLET FEVER.

The number of notifications of cases of scarlet fever in the County during 1904, was 2,827, which is equal to a case rate of 3·03 per 1,000 persons living.

Cases were notified in all districts except Wembley.

The corrected number of deaths was 44, or a case mortality rate of 1·5 per cent.

In the following table are given the case and death rates per 1,000 persons living, and the case mortality, or percentage of deaths to cases, for each of the last four years :—

Year.	Case rate.	Death rate.	Case mortality per cent.
	Per 1,000 living.		
1901	4·36	0·076	1·76
1902	3·69	0·076	2·07
1903	3·10	0·066	2·14
1904	3·03	0·047	1·55

The distribution of the cases of scarlet fever during 1904 at various age groups was as follows. The corrected deaths and the case mortality at each age group are also given :—

Age group.	Cases.	Corrected deaths.	Case mortality per cent.
0—	23	—	—
1—	774	23	2·5
5—	1,662	19	1·1
15—	247	1	0·4
25—	120	1	0·8
65 and up	1	—	—

The cases notified, together with the deaths recorded in the report relating to each district, are set out in the following table :—

—		Cases.	Recorded Deaths.	—		Cases.	Recorded Deaths.
URBAN.							
Acton ..	..	129	1	Kingsbury ..	..	2	—
Brentford ..	..	54	—	Southall-Norwood..	..	156	3
Chiswick ..	..	106	5	Southgate ..	..	91	1
Ealing (<i>Borough</i>) ..	..	177	4	Staines ..	..	3	—
Edmonton ..	..	181	3	Sunbury ..	..	73	1
Enfield ..	..	140	3	Teddington..	..	12	—
Feltham ..	..	7	—	Tottenham ..	..	307	7
Finchley ..	..	161	1	Twickenham	..	101	1
Friern Barnet ..	..	35	—	Uxbridge ..	..	11	—
Greenford ..	..	1	—	Wealdstone..	..	22	—
Hampton ..	..	51	—	Wembley ..	..	—	—
Hampton Wick ..	..	2	—	Willesden ..	..	326	2
Hanwell ..	..	14	—	Wood Green	..	90	2
Harrow ..	..	33	—	RURAL.			
Hendon ..	..	88	3	Hendon ..	..	21	—
Heston and Isleworth	..	65	—	South Mimms	..	7	1
Hornsey (<i>Borough</i>)	..	197	1	Staines ..	..	95	2
				Uxbridge ..	..	69	—

COUNTY OF MIDDLESEX.

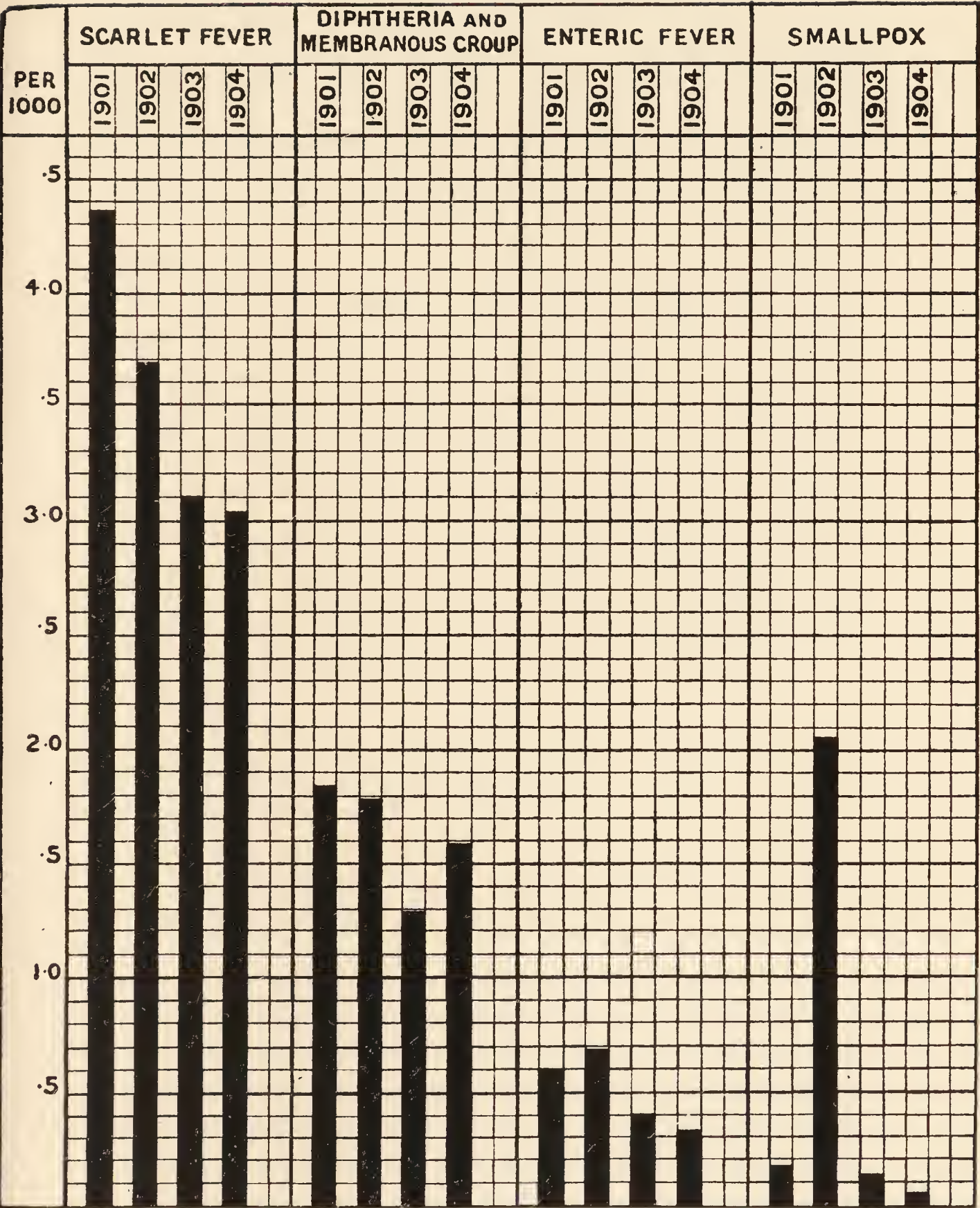


DIAGRAM 5,
SHOWING CASE RATE PER 1,000 PERSONS LIVING
OF CERTAIN NOTIFIED DISEASES.

From the accounts given in the various reports there is no evidence showing that epidemic outbreak of the disease traceable to milk occurred during the year. Many of the medical officers express the opinion that the most fruitful source of the complaint was direct infection from a previous case, and that the spread of scarlet fever in this way was much favoured by the fact that the disease being of a very mild type, many children affected were so slightly ill that frequently little heed was paid to the matter, and medical attendance was not requisitioned. As a consequence children often returned to school or were allowed to mix freely with others who afterwards developed the disease in a more readily recognizable form. Attention was thus drawn to the former children who have then frequently been found to present signs, such as desquamation of the skin, or discharge from the nostrils or ears, indicative of the fact that they had suffered from scarlet fever.

The influence of schools in causing spread of scarlet fever is referred to in several reports.

Dr. MacFadden writes: "The chief feature that marked the disease throughout the year, was the number of cases that were overlooked or mistaken by the parents for complaints of a minor nature such as simple sore throat, cold, and less frequently measles. On several occasions the medical attendant on being called in to see a patient, has found another child of the family in the peeling stage having evidently passed through the acute stage of the illness without attracting special notice."

He proceeds to compare the degree of infectivity as displayed in the home and the school, and refers to cases which while able to give rise to others at home did not appear to have influence under school conditions. He quotes cases however showing that this was not always so and specially notes one instance where fifteen cases occurred amongst school children owing to the presence of two brothers who had attended school until Dr. MacFadden found them in the desquamative stage of the disease.

Dr. Andrews quotes his experience in Hendon (urban) as pointing to the mild undetected case as a source of infection. In eight cases, children—four of whom were attending school at the time—were discovered in the desquamative stage. The disease was most prevalent in one ward, namely, Central Hendon, and he states:—

“ I feel convinced that the continuance of the
“ disease in this quarter has been caused by mild
“ undetected cases, so much so that a doctor is not
“ even called in to attend them.”

Dr. Windle, reporting in regard to the disease in Southall-Norwood, gives a detailed account of its occurrence during the year. At one period there was reason for thinking that milk might have influence and, at his request, I visited the district and with Dr. Windle carefully investigated the matter, and inspected the farm and the cows from which the milk was obtained. This farm is situated in a neighbouring district in the county, and the medical officer of health was therefore communicated with on the matter but there was no evidence to show that there was any illness at the time or just previously of a scarlatinal nature amongst the workers at the farm or among the retailers of the milk. The evidence

which we obtained after two days' inquiry did not support the suspicion in regard to milk, and facts which appeared in connection with cases occurring immediately afterwards went to show that direct infection from person to person—in which mild unrecognized cases had played part—had contributed largely in causing the spread of the disease in the district.

Thus, as the result of further enquiries made by Dr. Windle, several children were found in attendance at school during the period when they must still have been infective. Another factor which probably had influence is referred to by Dr. Windle as follows :—

“The prevalence of measles during summer was
“undoubtedly a contributory cause in the spread of
“scarlet fever. Several instances came under notice
“in which cases of scarlet fever had been nursed up
“at home under the impression that they were
“measles—medical advice not having been sought.”

Dr. Butler-Hogan, medical officer of health of Tottenham, also notes that he discovered a number of children attending school whose skin was desquamating as the result of scarlet fever, and expresses the opinion that direct personal infection was the chief cause in transmission of the disease.

Dr. Butler, of Wealdstone, in referring to the influence of schools makes the following criticism as regards the return to school, too early, of children after an attack of illness which, as in so many cases of recent scarlet fever, may have been only slight in character :—

“I think school authorities are somewhat to blame
“in this matter, for the parents are so worried by the

“inspector if the children are kept at home even for
“a day, that they are often sent back against the
“parents’ wishes and better judgment.”

Until a proper system of medical control of children attending school is inaugurated, the spread of scarlet fever and other infectious complaints through the agency of schools will be a difficult matter to deal with adequately. The best method to adopt for this purpose is one, however, which needs careful consideration, as the subject presents many complications and involves considerable expenditure. At the present time the matter of the medical supervision of schools is under the consideration of an Inter-Departmental Committee.

In his report for 1903 on the rural district of Hendon, Dr. Campbell Gowan commented on the prevalence of scarlet fever in 1902 and 1903 at the Commercial Travellers’ School at Pinner. For 1904 he is able to report the practical absence of the disease and states :—

“This salutary improvement has been largely
“brought about by the proper disinfection of the
“bedding in the disinfecting apparatus at the Isolation
“Hospital and the adoption of certain other sugges-
“tions made by your officers.”

In the case of Sunbury, it is reported by the Medical Officer of Health that scarlet fever appeared in July and remained “more or less prevalent up to the end of the year,” and 73 cases in all were notified, a large number for a community of under 5,000 persons. It appears to have been of a mild type causing much difficulty in diagnosis. From Sunbury scarlet fever spread to the adjoining district of Staines (rural) apparently through the medium of schools.

but it is reported that, owing to the mild character of the disease, children whilst in an infective condition mixed freely with others. The occurrence of the disease led to the closure of several schools both in Sunbury and Staines (rural). In connection with this I visited the schools in these districts, examined, on behalf of the Education Committee, several hundred children when they reassembled, and excluded some whom I thought from their appearance had in all probability suffered from the complaint, but had not been regarded as so ill as to need the attention of a medical man.

The excessive prevalence of scarlet fever in this part of the County has led me to examine the figures relating to the occurrence of the disease in Sunbury, Staines (rural) and Staines (urban) districts for the last five years and these are not without interest. Thus in 1899 and 1900 scarlet fever was very prevalent in Staines (urban), in 1901 and 1902 it was slightly less prevalent in Staines (urban) and Sunbury than in the rest of the County, but in Staines (rural) there was a small increase. In 1903 scarlet fever began to increase in Sunbury and in 1904 became relatively very high, whilst there was also an increase in Staines (rural).

All the districts mentioned are without isolation hospital accommodation for this complaint and there is little doubt that inability to secure proper isolation of cases whilst still infective had influence in maintaining the disease.

DIPHTHERIA AND MEMBRANOUS CROUP.

The total number of cases notified in the County (not including membranous croup), was 1,465. Cases were notified in all districts except Greenford and Kingsbury.

There were also 18 cases of membranous croup notified, namely, 1 case each in Acton, Chiswick, Enfield, Hampton Wick, Wood Green, and South Mimms; 2 cases each in Edmonton, Southall-Norwood, Willesden, and Staines (rural); and 4 in Tottenham. Adding these to the cases of diphtheria, the case rate is equal to 1·59 for every 1,000 persons living. This as will be seen from Diagram 5, is greater than in 1903, but less than in 1902 and 1901.

The total deaths were 139, which represents a death-rate of 0·149 per 1,000 persons living, and a case mortality of 9·3 per cent.

The following table gives the case rate and death-rate per 1,000 and the case mortality per cent for the last four years :—

Year.	Case rate	Death rate	Case mortality per cent.
	Per 1,000 living.		
1901	1·84	0·228	12·3
1902	1·79	0·261	14·5
1903	1·29	0·148	11·5
1904	1·59	0·149	9·3

The age distribution of the cases and deaths during 1904 was as follows :—

Age group.	Cases.	Corrected deaths.	Case mortality per cent.
0—	16	3	18·7
1—	461	85	18·4
5—	740	51	6·8
15—	141	—	—
25—	125	—	—
65 and up	—	—	—

The above table shows clearly how much more fatal the disease is amongst children under five years of age.

The cases of diphtheria and membranous croup notified, and the number of deaths recorded in each district report are set out in the following:—

—	Cases.	Deaths Recorded.	—	Cases.	Deaths Recorded.
URBAN.					
Acton ..	33	2	Kingsbury ..	—	—
Brentford ..	14	2	Southall-Norwood..	19	2
Chiswick ..	38	6	Southgate ..	23	1
Ealing (<i>Borough</i>) ..	15	1	Staines ..	6	—
Edmonton ..	45	10	Sunbury ..	107	18
Enfield ..	54	1	Teddington..	11	2
Feltham ..	7	2	Tottenham..	170	23
Finchley ..	68	3	Twickenham	30	2
Friern Barnet ..	12	1	Uxbridge ..	4	—
Greenford ..	—	—	Wealdstone	5	—
Hampton ..	12	3	Wembley ..	5	—
Hampton Wick	3	—	Willesden ..	353	19
Hanwell ..	18	1	Wood Green	172	17
Harrow ..	6	—	RURAL—		
Hendon ..	19	1	Hendon ..	5	—
Heston and Isleworth	37	2	South Mimms	2	—
Hornsey (<i>Borough</i>)	101	7	Staines ..	23	2
			Uxbridge ..	61	4

In none of the reports of the district medical officers of health, except two, viz., Sunbury and Tottenham, is it reported that diphtheria assumed anything in the nature of an epidemic. In several instances these officers give details of cases and groups of cases as regards the origin of which little conclusive evidence could be obtained.

It is now a recognized fact that diphtheria is spread at school or other places where children come closely into contact by direct infection from other children or persons as regards whom there is no reason to suppose that they have suffered from the complaint, and who may apparently not have been ill at all or have merely suffered from a slight degree of sore throat not sufficiently serious to prevent them following their usual avocations. Examination, bacteriologically, of material from the throat of such persons or children upon the occurrence of a clinical case of diphtheria amongst their associates has shown that such material contains the bacillus of diphtheria; and it is an important matter from the point of view of the prevention of the spread of the disease that when a case occurs bacteriological examination in the above sense should be made as regards those persons who have been in close contact with the patient just previously to the illness of the latter.

It is probable that with extended use of the aid afforded by bacteriology the origin of many cases which at present can only be surmised would be definitely associated with a person or child who showed no signs of being in an infective condition.

In many of the districts arrangements have been made by which medical practitioners can, through the Public Health Departments, avail themselves of the aid of

COUNTY OF MIDDLESEX.

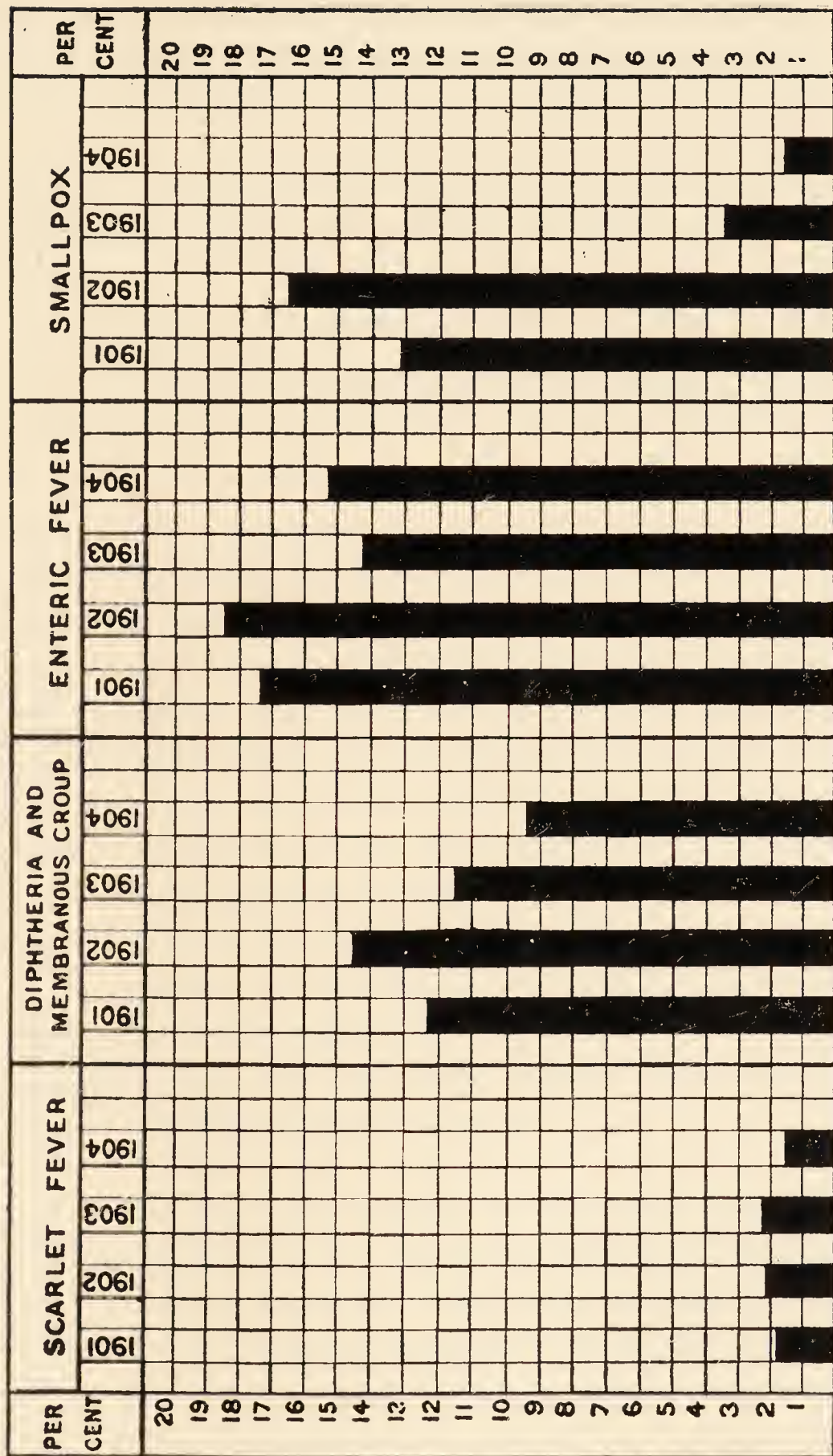


DIAGRAM 6, SHOWING MORTALITY PER CENT. OF CASES NOTIFIED.

bacteriological examinations, but in one district, namely Hanwell, the sanitary authority have decided to discontinue this.

Supplies of diphtheria antitoxin for treatment can also be obtained from the medical officers of health in several districts.

As regards the two districts in which diphtheria was present to a considerable extent, the following accounts may be given.

Sunbury.—It is necessary to refer to the history of the disease in this district for the few years antecedent to 1904, the year under review. Up to the end of 1902 this district was relatively free from diphtheria. Thus I find from the County reports for 1899, 1900, and 1901 that no cases are recorded for these years. In 1902 2 cases of diphtheria and 1 of membranous croup were notified. During 1903 as many as 63 cases of diphtheria were notified, and it appears that the disease appeared in March in various parts of the district, and cases continued to occur here and there until the autumn, culminating in an explosive outburst in December, which apparently was largely due to an “overlooked case and not under medical supervision.” Closure of the schools was resorted to.

The disease was also present in somewhat increased degree during 1903 in the adjoining district of Staines (rural), but it is reported “that only in one parish (Bedfont) did it “become epidemic.” It should also be noted that in Staines (urban) which adjoins the rural district of the same name, a considerable amount of diphtheria occurred in 1901.

It would appear therefore that the disease, although absent in Sunbury until 1903, had been prevalent in this part of the County since 1901 and that at the end of 1903 Sunbury was suffering considerably from it.

During 1904, as many as 107 cases were notified, giving rise to 18 deaths, and Dr. Morris states that the disease "has been present practically throughout the year." It appears to have chiefly affected Upper Sunbury, that portion of the district furthest from the river, though it also occurred in Lower Sunbury towards the end of the year.

Soon after I took up my duties as County Medical Officer in May, 1904, Dr. Morris consulted me on the subject, and, as it appeared from the facts that personal infection was playing considerable part in maintaining the disease, I suggested the desirability of having material from the throats, etc., of "contacts" examined bacteriologically. This was done to a small extent, but difficulty in the matter arose, and it was not possible to pursue it to any useful degree. In a special report Dr. Morris drew attention to the need of an isolation hospital and proper means of disinfection, and, as a result, communications on the matter were addressed by the County Council to the District Council, and at the end of 1904 these matters were still under consideration, as the District Council replied that a conference on the question of providing a hospital jointly with adjoining authorities, viz., Staines (urban), Staines (rural), and the newly-created urban district of Feltham, none of which have isolation accommodation, was to be held.

Referring in his annual report for 1904 to the difficulty of obtaining proper isolation of patients at home during

the prevalence of diphtheria, Dr. Morris makes a strong plea on this score for the provision of a properly equipped isolation hospital, and states:—

“The present epidemic has been rife amongst the
“artisan class, who, as a rule, cannot afford a pro-
“longed medical attendance, and consequently cases
“are to a certain extent allowed to drift and become
“a source of danger to the community.”

As a temporary measure he advised that a cottage might be taken for use as a temporary hospital; but this course was not agreed to.

During the course of the disease several schools in the district were closed on the advice of Dr. Morris, and he draws attention to the need of systematic inspection of school children with a view to checking the spread of infectious disease.

And he adds:—

“Some 150 children attending St. Saviour’s Schools
“were constantly examined by me after the reopening
“in February.”

He also caused certain alterations in connection with the drainage of the schools to be effected.

Finally, in writing on the subject of the possible origin of the disease, Dr. Morris draws attention to the flood which occurred in the middle of 1903, which interfered with the proper working of the sewers, and this, he adds,

“in my opinion lowered the vital power of children
“and greatly lessened their normal resisting power,
“particularly in the region of Sunbury Common.”

On reference to the section of this report on sewerage it will be seen that the District Council are taking action to improve the condition of the sewers.

As regards the question of providing isolation hospital accommodation, no definite action beyond arranging for a conference with adjoining districts has yet been taken, but it is to be hoped that as a result of the recent experience the sanitary authority will jointly with the other authorities mentioned above deal with this matter without further delay. The fact that so many children have now suffered from the disease will probably have the effect of making the district free for some time from diphtheria, a state of things which should not lull the sanitary authority into a false sense of security. Further reference to the need of a hospital will be found in the section on Isolation Hospitals.

Tottenham.—In the case of Tottenham there was also an increased incidence of diphtheria; this the Medical Officer reports

“ was due to an epidemic which prevailed in the
“ Middle Ward from the middle of June to the third
“ week of September.”

He expresses the opinion that the foul condition of a watercourse (which at the time was being covered in) during the summer had connection with the occurrence of some of the cases, but as regards many, the suggested cause is contact with a previous case. The total number of cases was 170 with 73 deaths. Bacteriological examination for diagnostic purposes is made available by the District Council, and isolation hospital accommodation and disinfection of articles of clothing, &c., by means of steam are provided.

Staines (rural).—In the district a small outbreak occurred amongst the children at the Welsh Schools at Ashford, causing 13 cases. Certain sanitary defects were found and are being altered.

TYPHOID FEVER.

The number of cases of typhoid or enteric fever notified in the County in 1904 was 302. This represents a case rate of 0·32 per 1,000 persons living. Cases occurred in all districts except Greenford, Hampton Wick, Kingsbury, Uxbridge (urban) and Wealdstone.

The corrected deaths amounted to 47 which gives a death rate per 1,000 of 0·50 and a case mortality per cent. of 15·2 for the County.

The following Table shows the case rate and death-rate per 1,000, and the case mortality per cent. for each of the last four years :—

Year.	Case rate.	Death rate.	Case mortality per cent.
	Per 1,000 persons living.		
1901	0·60	0·108	17·3
1902	0·69	0·127	18·4
1903	0·40	0·057	14·2
1904	0·32	0·050	15·2

The age distribution of the cases and deaths during 1904, was as follows :—

Age group.	Cases.	Corrected deaths.	Case mortality per cent.
0—	—	—	—
1—	17	1	5·8
5—	92	9	9·7
15—	72	10	13·8
25—	118	26	22·0
65 and upwards.	3	—	—

The cases of typhoid notified and the deaths recorded in each district are set out in the following table :—

—	Cases.	Deaths recorded.	—	Cases.	Deaths recorded.
URBAN.					
Acton ..	8	3	Kingsbury ..	—	—
Brentford ..	30	4	Southall-Norwood ..	9	—
Chiswick ..	19	—	Southgate ..	5	—
Ealing (<i>Borough</i>) ..	5	1	Staines ..	1	—
Edmonton ..	38	8	Sunbury ..	3	—
Enfield ..	16	3	Teddington ..	8	—
Feltham ..	2	—	Tottenham ..	39	7
Finchley ..	4	—	Twickenham ..	7	2
Friern Barnet ..	2	—	Uxbridge ..	—	—
Greenford ..	—	—	Wealdstone ..	—	—
Hampton ..	2	1	Wembley ..	1	—
Hampton Wick ..	—	—	Willesden ..	38	8
Hanwell ..	1	—	Wood Green ..	9	1
Harrow ..	1	—	RURAL.		
Hendon ..	8	—	Hendon ..	2	—
Heston and Islewerth ..	15	—	South Mimms..	1	—
Hornsey (<i>Borough</i>) ..	16	2	Staines ..	10	1
			Uxbridge ..	2	—

The following references are made in the reports of the district medical officers.

Brentford.—“ A serious outbreak occurred in a small
“ portion of St. Paul’s district which caused four
“ deaths in the Isolation Hospital. An ancient water-
“ course called the ‘ Brook ’ runs from Ealing through
“ Brentford to the Thames. This is liable during
“ excessive rain to overflow in the lowest part in
“ Albany Road and flood some of the small cottages
“ there. Sewage containing enteric germs must
“ have passed with the storm water, and this later
“ on caused the epidemic. The Brentford system of
“ drainage is not connected in any way with the
“ ‘ Brook.’ All the cases, 22 in number, occurred in
“ the houses which were flooded or in their imme-
“ diate neighbourhood.”

Edmonton.—Dr. MacFadden states that the origin of most cases was obscure, but he refers to one series of cases brought about by drinking water from a polluted well on certain business premises. A case from this source also occurred in the person of a workman employed at the works but who lived in Enfield. The water of the well on analysis was found to be seriously polluted and the well was closed.

As regards another group of cases he writes:—

“ During the months of August and September a
“ series of cases, 7 in all, occurred, in which there
“ was a history of the patients having eaten fried
“ fish some time previous to their failure; a few,
“ indeed, ascribed their illness to one particular meal

“they had eaten, but owing to the length of time
“that had elapsed it was found impossible to fix the
“actual source of the supply.”

In regard to fried fish as a possible source of the disease, he adds:—

“The question of fried fish, and the circumstances
“attending its cooking and eating, are, I think,
“worthy of further investigation as a possible source
“of this disease.”

Hendon (urban).—Dr. Andrew quotes the following, showing the possibility of direct personal infection:—

“Eight cases were notified—one less than last year.
“This disease appears to be getting less each year, for
“in 1902 there were 23. Of the 8 cases notified, 5
“occurred in one family, leaving only 4 families who
“were affected.

“With respect to the family of five affected, the
“facts are as follows:—

“In January the first case was notified, and was
“sent to a London hospital. This was followed
“during February by four other members being
“taken ill. The conditions under which they lived
“were most unsatisfactory, and all were sent to
“hospital. I found that the children had all drunk
“out of the same mugs used by the other patients.
“I feel sure they contracted the disease by direct
“inoculation. The drainage and water supply were
“found satisfactory.”

Teddington.—Dr. Günther writes as regards the cause of the cases in this district:—

“Eight cases were notified; there was no death.
 “In 3 of these cases the eating of ice-creams
 “bought from Italian hawkers was the probable cause
 “of the outbreak. In another case the patient had
 “partaken of oysters about ten days before his illness.
 “In the other cases no cause could be ascertained.
 “Drainage and water supply were found to be good.”

In the case of *Hornsey*, Dr. Coates states that out of 16 cases notified, 7 were contracted outside the borough, and that in one other case there was evidence pointing to infection from shell fish.

In *Southall-Norwood*, in *Hampton* and *Hendon* (*rural*) cases are reported in which the disease must have been contracted outside the district.

In *Sunbury*, 3 cases were notified, and it is stated that the first case was “introduced from outside the district “and caused the two latter.” The cases were removed to Richmond Hospital.

CONTINUED FEVER.

Only one case was notified as due to this disease during 1904.

PUERPERAL FEVER.

The number of cases notified during 1904 of puerperal fever was 56. The number in previous years was—

1903	..	..	..	48 cases.
1902	..	..	..	42 „
1901	..	..	..	35 „

The corrected number of deaths during 1904 was 46.

The case rate or proportion of cases of puerperal fever to every 1,000 births registered during the last four years in the County as a whole has been

In 1901	..	..	1·5	per 1,000 births.
1902	..	..	1·7	„ „
1903	..	..	1·9	„ „
1904	..	..	2·1	„ „

There appears therefore to be a tendency to slow increase, assuming that the number of births *registered* in each year bears the same proportion to the number of women who have actually given birth to a child, which of course may not be the case, inasmuch as the proportion of still-births, which are not registered, may have varied, but there is no means of ascertaining this.

The increase may also be due in part to a more comprehensive inclusion by medical practitioners of cases of fever occurring during the lying-in period in the term puerperal fever which are then notified as such.

The cases notified were distributed throughout the County as follows :—

Urban.

Acton	..	..	4	Hampton	..	..	—
Brentford	..	..	—	Hampton Wick	..	..	—
Chiswick	..	..	3	Hanwell	..	..	1
Ealing	..	..	2	Harrow	..	..	1
Edmonton	..	..	1	Hendon	..	..	—
Enfield	..	..	5	Heston and Isleworth	..	..	5
Feltham	..	..	—	Hornsey	..	..	5
Finchley	..	..	2	Kingsbury	..	..	—
Friern Barnet	..	..	1	Southall-Norwood	..	..	—
Greenford	..	..	—	Southgate	..	..	1

Urban—continued.

Staines	—	Willesden	5
Sunbury	—	Wood Green	5
Teddington	1		
Tottenham	9	<i>Rural.</i>	
Twickenham	2	Hendon	—
Uxbridge	1	South Mimms	—
Wealdstone	—	Staines	1
Wembley	—	Uxbridge	1

During the latter half of the year, some of the Medical Officers of Health were good enough to inform me, as soon as they received notifications of puerperal fever under the Infectious Diseases Notification Act, of those cases in which a midwife had been in attendance on the patient. I made inquiry into these, but as none of the midwives had been certified under the Midwives Act, they did not come under the rules framed by the Central Midwives Board, and it was not possible for the County Council as Local Supervising Authority, to take any action in regard to them. Disinfection of the midwives and their appliances was effected by the Sanitary Authorities. At the end of the year I initiated a system of weekly interchange of the notifications of infectious disease in each district in the County, by means of which I now become cognisant of the notifications of disease in each week, and I am thus able to make inquiry, with the aid of the district medical officers, as to whether a midwife has been in attendance on any case of puerperal fever which may occur.

As regards the other work done under the Midwives Act, in connection with systematic visiting and examination of the books and appliances, which certified midwives are required to keep, an account will be found later in this report under the section relating to the Midwives Act.

TYPHUS. RELAPSING FEVER. CHOLERA.

No cases of any of these diseases were notified in the County during the year 1904.

ERYSIPELAS.

Notifications as to 661 cases of Erysipelas were made during 1904, and 42 deaths occurred.

The number of cases in previous years were: 591 cases in 1903, 691 in 1902, and 641 in 1901.

Cases were notified in all districts except Hampton Wick, Kingsbury and Staines (urban), as follows:—

Urban.

Acton	24	Southall-Norwood	16
Brentford	19	Southgate	22
Chiswick	43	Staines	—
Ealing (<i>Borough</i>) ..	33	Sunbury	7
Edmonton	74	Teddington	8
Enfield	28	Tottenham	65
Feltham	8	Twickenham	8
Finchley	30	Uxbridge	5
Friern Barnet	7	Wealdstone	5
Greenford	1	Wembley	8
Hampton	3	Willesden	73
Hampton Wick	—	Wood Green	24
Hanwell	15		

Rural.

Harrow	4	Hendon	6
Hendon	7	South Mimms	5
Heston & Isleworth	23	Staines	28
Hornsey (<i>Borough</i>)	40	Uxbridge	22
Kingsbury	—		

WHOOPIING COUGH.

The corrected number of deaths from whooping cough during 1904 was 172, equal to a death-rate of 0·18 per 1,000 persons living. The deaths and death-rate for each of the last four years were as follows :—

Year.			Deaths.	Death-rate per 1,000.
1901	..	..	238	0·30
1902	..	..	225	0·27
1903	..	..	363	0·40
1904	..	..	172	0·18

It will be observed that the deaths from this complaint were considerably less in 1904, and from the references in the reports of the medical officers it does not appear to have been prevalent to any marked extent during the year. Much information regarding the presence or absence of whooping cough, measles, and other non-notifiable disease is being obtained by the system of notification of cases of sickness by school teachers to medical officers where this can be followed up by enquiries at the house of the children. Dr. Butler, medical officer of Willesden, especially refers to this in his report, and has given a table showing the attack rate of a number of diseases upon children above and below 5 years of age. In the case of whooping cough he finds that the percentage of school children under 5 years contracting the disease was 1·1 as compared with 0·2 over 5 years.

He, as well as the medical officers of Acton, Edmonton, Hornsey and Tottenham, specially refer to the much greater fatality which attaches to the disease amongst children under 5 years.

In most reports attention is drawn to the tendency of parents and others in charge of children to regard whooping cough—just as in the case of measles—as a trivial complaint, with the consequence that not only is no attempt made to keep the infected child apart from others, but the disease is not treated with that care which it requires, and medical advice is not always sought. It will be seen from Diagram 7 that the death-rate from this complaint is one of the highest of the infectious disease death-rates, and it is a matter of great importance therefore that it should be known that this is largely due to the lung complications which develop in the course of the attack, and to prevent which much can be done by careful treatment and precaution against exposure of the patient. With a view to diffusion of knowledge on these points leaflets setting out the dangers of the disease and the need of care being taken are issued by several authorities. In the case of Acton this leaflet is published in the report.

Dr. Hope, of Hanwell, makes the following remarks:—

“The disease is often treated lightly by the public, although so infectious, and children suffering from it in its worst form may often be seen in the street and public conveyances, and actually on their way to the out-patient departments of many London and other hospitals for treatment.”

MEASLES.

The corrected number of deaths and the death-rates from measles of persons belonging to the County during

COUNTY OF MIDDLESEX.

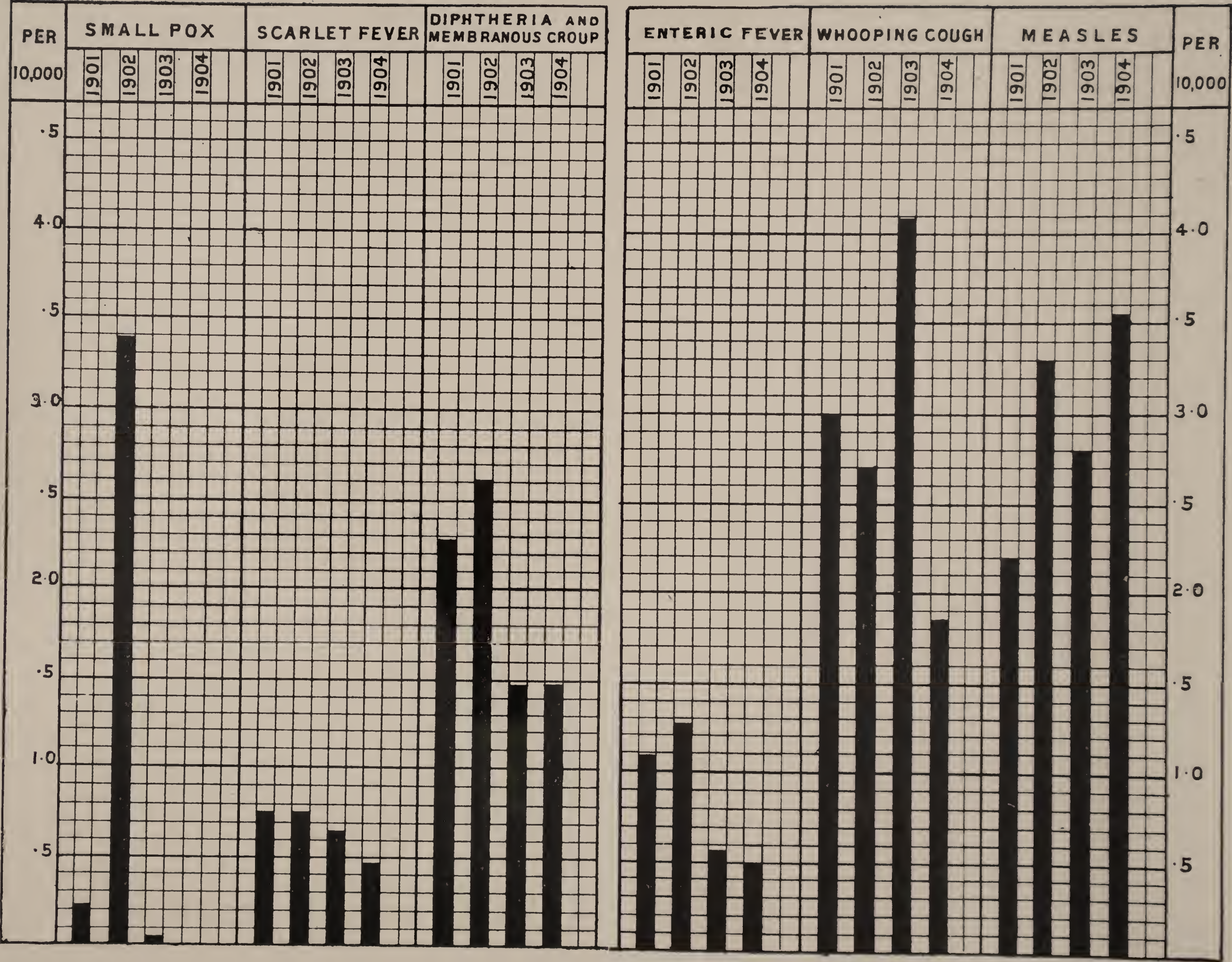


DIAGRAM 7,
SHOWING DEATH-RATES PER 10,000 PERSONS LIVING
FROM CERTAIN INFECTIOUS DISEASES.

each of the last four years are shown in the following table:—

Year.			Corrected deaths.	Death-rate per 1,000 persons.
1901	..	..	174	0·21
1902	..	..	275	0·33
1903	..	..	249	0·28
1904	..	..	331	0·35

It will be seen in Diagram 7 that the death-rates from this disease are usually considerably greater than those from scarlet fever or diphtheria, and are only equalled more or less by the death-rates due to whooping-cough. This fact is referred to by many of the Medical Officers in their reports, and they express the opinion that the excessive mortality is in part to be accounted for by the fact that the disease is regarded by so many parents as one of a slight character only, and not needing medical attention. As a consequence, children are not properly taken care of and develop chest complications which frequently result in death.

Dr. Campbell Gowan, writing in the report for Hendon (rural), on this subject, states:—

“ This disease, which is infinitely more fatal and to
 “ be dreaded than scarlet fever, is still looked upon
 “ by the majority of parents as a trivial and necessary
 “ ailment. As a consequence of this mental attitude,
 “ medical assistance is often only sought when the
 “ case is in a critical or hopeless condition, a condition
 “ which it is pitiable to witness. It cannot be too

“widely known that, apart from the actual danger to
 “life, the sufferings of a child who is very ill with
 “measles are most distressing and acute. Moreover,
 “it is one of the commonest causes of chronic middle
 “ear disease, a disease which, even after twenty
 “years of discomfort and partial deafness, may become
 “acute, and place the patient’s life in jeopardy.”

The disease was prevalent during the year in several parts of the County, as follows :—

During the early part or first half of the year, in Acton, Chiswick, Edmonton, Feltham, Finchley, Friern Barnet, Wembley, and during the latter half of the year in Southall-Norwood, Teddington, and Hendon (rural). In the case of Hendon (urban) it is stated to have been very prevalent throughout the year.

The disease is notifiable in the district of Hampton, and Dr. Tyndale reports as follows :—

“There were two distinct outbreaks of measles
 “during the year—at Hampton in the spring, and
 “at Hampton Hill nearly at the close of the year.
 “Both outbreaks were severe, necessitating the closure
 “of the public elementary schools, and the Managers
 “of the various Sunday Schools, upon my recommenda-
 “tion, kindly closed those schools also. There was
 “no fatality from this disease.”

The total number of cases notified in Hampton was 299 at the following ages :—

0—	1—	5—	15—	25 and up.
11	122	158	6	2

The prevalence of measles was the cause of many school closures.

The medical officers of Acton, Edmonton, Heston and Isleworth, Tottenham and Willesden refer to the fact that a system of notification to them by school teachers, of children who are ailing, or who are absent owing to measles has enabled visits to be made to the houses. By this means useful action can be taken, not only to prevent the spread of the disease, but also by giving instructions to the parents as to the risks of the complaint, to prevent the development of some of the more serious after consequences. In connection with this system of voluntary notification, Dr. Steegmann makes the following remarks in his report on Heston and Isleworth :—

“ It is not to be assumed that all voluntary notifica-
“ tions of cases sent from the school-teachers, in which
“ the disease is stated to be measles, are in fact
“ measles. An experienced teacher can in most cases
“ recognize a child suffering from the early signs of
“ the disease, and will send it home and notify the
“ health department. But very often the teacher does
“ not see the child. A message is brought that it is
“ kept at home because it, or one of the family, has
“ measles, and this statement is frequently accepted
“ without verification. The great anxiety of the
“ school authorities to exclude all cases of measles
“ makes this complaint a convenient and favourite
“ excuse for keeping elder children at home, and
“ the unwillingness of the parent to call in a doctor
“ at once makes it often impossible to verify the
“ diagnosis. A number of cases were investigated on
“ the same day that they were stated by the parents
“ to be absent from school on account of measles, and
“ it was found that some of the children were quite
“ well, others were suffering from complaints, not

“ measles, and only a very small proportion had been
 “ seen by a doctor before the notice was sent to the
 “ schools. It is important to remember that, unless a
 “ doctor sees the patient whilst the rash is visible, in
 “ many cases he cannot possibly be certain that the
 “ disease is measles, and he cannot give a certificate
 “ when he sees the child after recovery unless he
 “ depends entirely for his diagnosis on the word of
 “ the mother.”

In the case of some districts, leaflets of instruction as to the dangers of measles have been prepared, and this, it is hoped, may have influence in preventing the disease being regarded by parents as a matter of little, if any, consequence

DIARRHŒA.

The corrected number of deaths from diarrhœa, belonging to the County, which occurred during 1904 was 1,128, which is equivalent to a rate of 1·21 per 1,000 persons living. This does not include deaths due to enteritis.

The following table shows the number of deaths and the death-rates per 1,000 persons living for each of the last four years:—

Year.	Deaths.	Death rate per 1,000 living.
1901	723	0·91
1902	465	0·55
1903	449	0·50
1904	1,128	1·21

The above figures show that there was a marked increase in the deaths during 1904. In the last report for 1903, I referred to the decrease which had taken place in the mortality from this complaint, and suggested that in all probability this was largely to be accounted for by the fact that both 1903 and 1902 were cool summers, and that the former year had been especially characterised by a cold and wet summer. With a change in these conditions during 1904, an increase in the deaths has taken place.

If examination is made of the table showing the various causes of death during 1904 in an earlier part of this report it will be seen that the bulk of the deaths (922) from diarrhoea occurred amongst children under one year of age, and the same statement applies to the deaths during the previous three years. In other words this complaint is one chiefly affecting infants, and the subject is fully dealt with in the section relating to Infantile Mortality.

PHTHISIS AND TUBERCULAR DISEASE.

During 1904 there occurred 993 deaths from phthisis amongst residents of the County. In addition, 435 deaths were attributed to other tubercular diseases, or a total of 1,428 deaths due to infection by the tubercle bacillus.

In the following table are given the corrected number of deaths for each of the last four years, together with the death rates per 1,000 persons living:—

Year.	Phthisis.		All Tubercular Disease.	
	Deaths.	Death rate per 1,000.	Deaths.	Death rate per 1,000.
1901	752	0·94	1,139	1·43
1902	843	1·01	1,277	1·53
1903	788	0·88	1,221	1·37
1904	993	1·06	1,428	1·53

These deaths occurred at the following age periods :—

Age Group.	1901.		1902.		1903.		1904.	
	Phthisis.	Other Tubercular Disease.	Phthisis.	Other Tubercular Disease.	Phthisis.	Other Tubercular Disease.	Phthisis.	Other Tubercular Disease.
0—	8	124	15	147	12	149	11	163
1—	14	131	18	144	25	143	33	134
5—	33	70	22	70	33	57	40	65
15—	105	20	132	26	133	31	176	23
25—	562	38	623	44	556	51	696	39
65 and upwards	30	4	33	3	29	2	37	11

The figures in the last table show that phthisis, or the disease usually known as consumption, exacts its heaviest toll during the active and most useful period of life, whilst other tubercular complaints cause mortality chiefly under 5 years of age. It would be an interesting matter if figures were available for shorter age periods between 25 and 65 years of age, with a view to seeing whether the greater number of the deaths in this group occurred at the earlier years, as is, perhaps, the case. I find from the annual report for 1903 of the medical officer of health of the Administrative County of London that the number of deaths in London from phthisis at several age periods were thus distributed :—

Age period	} 0—, 5—, 10—, 15—, 20—, 25—, 35—, 45—, 55—, 65—.
Phthisis deaths	
	} 236, 70, 94, 342, 551, 1509, 1862, 1439, 713, 317.

These figures indicate that the majority of deaths occur between 20 and 55 years of age.

In many of the district reports reference is made as to the action which is being taken with a view to the reduction in the mortality from and the prevention of this disease.

In the district of Acton voluntary notification is in force, and all cases coming to the knowledge of the Public Health Department are visited, and instructions, by leaflets and otherwise, are given to the patient and other inmates of the house as to the precautions which should be taken. During the year the District Council decided to take three beds at Mount Vernon Hospital situated at Northwood, for the use of persons from the district.

In Chiswick the disease has been voluntarily notifiable for over two years.

Dr. Bott comments on the occurrence of 30 deaths from phthisis in Brentford, and as to the need of educating persons suffering from it as to the importance of general cleanliness, of the avoidance of the habit of carelessly expectorating anywhere, of keeping windows open and of living as much as possible in the open air. He expresses regret that the proposal to establish a sanatorium for the use of residents in Middlesex has so far not been effected.

Dr. Patten, in his report on Ealing, suggests that consumption be made compulsorily notifiable, and adds:—

“The question of the treatment and the early arrest
“of this grave affliction is, as I know, receiving the
“serious attention of the Council and it requires,
“therefore, no words from me to enforce its importance.
“I hope that it may be my privilege another year to

“put upon record the fact of some arrangement for
“the treatment of this class of sufferers having been
“made.”

In the report on Edmonton the voluntary notification of consumption is advocated, and Dr. MacFadden adds, that in order to make such notification successful, the provision of treatment in a sanatorium is desirable.

He refers in detail to the movement for a proposed open-air sanatorium for the use of Middlesex, as regards which Edmonton was one of the first authorities to signify its support, and provisionally agreed to take up three beds. With this number of beds, he states that twelve to sixteen patients could receive sanatorium treatment yearly, and be educated as to their mode of living and the precautions which they should take in their own interests and those of others, when they return to their ordinary avocations.

In Finchley, consumption was made voluntarily notifiable at the end of 1903, the usual fee for notification being paid as regards any case which has not previously been notified from the same premises. During 1904, the number of notifications received was eight.

In Hanwell, the District Council have requested medical practitioners to make voluntary notifications of cases, but so far none have been notified.

In the case of Harrow, Dr. Fletcher Little reports :—

“Your Council has provided leaflets giving directions
“to the sufferers and their friends. If carried out,
“these will greatly help to prevent the spread of the
“disease. In July, a meeting of the medical men of

“the district was convened by your Council, and they
“agreed to voluntarily notify cases of consumption
“occurring in their practice. Five cases have been
“since notified, and the rooms occupied by the patients
“have been disinfected by the Sanitary Department.”

Dr. Harold Coates in his report on the health of the Borough of Hornsey draws attention to the fact that 77 deaths, or one out of every nine deaths from all causes was due to tuberculosis, and that the majority occurred in the middle period of life. He adds:—

“In the case of the commonest form of tuberculosis,
“consumption of the lungs, it has been shown that
“infection is spread by the dissemination of minute
“particles of sputum during the acts of coughing or
“speaking, and by spitting under conditions which
“favour the drying of the sputum, and its subsequent
“pulverisation and dispersion in the air.

“By proper care and training sufferers from con-
“sumption can be taught to so conduct themselves as
“to avoid the danger of infecting their fellow workers,
“or members of the family or others brought in frequent
“association with them.

“The adoption of such measures also promotes
“the ultimate recovery of the patient, as constant self
“reinfection is prevented.

“One of the great benefits to be expected of the
“proposed sanatorium for Middlesex is the education
“of patients, so that on their discharge they will not
“be a source of danger to those around them.”

In the report on Southall-Norwood, the medical officer writes as to the advantage which would accrue from the treatment of early cases in a sanatorium, and, as regards such institutions, expresses the opinion that—

“Those which are maintained by the combination of
“local authorities are an inestimable boon, since many
“of the sufferers are neither paupers nor persons able
“to pay the fees demanded by private institutions.”

He recommends the District Council to join the scheme for the proposed sanatorium for Middlesex.

Dr. Ransome states that in Southgate, 16 deaths from tubercular disease were recorded, 4 of which were from phthisis. In all cases coming to his knowledge, a visit to the home has been made, leaflets indicating the nature and risks of the complaint have been given, and disinfection of rooms has been carried out in all cases after death or removal of the patient. He states that the District Council is considering the question of providing two beds in a sanatorium for the use of residents of the district.

Dr. Charpentier, in his report on the Rural District of Uxbridge, writes as regards phthisis—

“Twenty deaths took place from this disease, which
“is far too prevalent for a rural district”;

but no information is given as to whether inquiries are made at the houses at which deaths occur, with a view to disinfection.

During the year the County Council of Middlesex adopted a bye-law prohibiting spitting in public spaces. This is to the following effect :—

BYE-LAW

MADE BY THE

County Council of Middlesex,

ON THE

2ND JUNE, 1904,

FOR THE

GOOD RULE AND GOVERNMENT OF THE COUNTY,

AS TO SPITTING.

No person shall spit on the floor, side, or wall of any public carriage, or of any public hall, public waiting room or place of public entertainment, whether admission thereto be obtained upon payment or not.

Any person who shall offend against this bye-law shall be liable for each offence to a fine not exceeding forty shillings.

Extent of Bye-law.—The above bye-law shall extend and apply to all parts of the Administrative County of Middlesex except such parts as are within any Municipal Borough.

The Common Seal of the County Council of Middlesex, was affixed hereto in the presence of—

RALPH LITTLER,
Chairman of the County Council.

WALTER GEO. AUSTIN,
Deputy Clerk of the County Council.



This Bye-law came into force on the 30th July, 1904.

CANCER.

The corrected number of death-rates from this disease belonging to Middlesex was 712, which is equal to a death-rate of 0·76 per 1,000 persons living.

The corrected number of deaths and the death-rates for each of the last four years for the County are as follows :—

Year.	Deaths.	Death rate per 1,000 living.
1901	642	0·80
1902	665	0·79
1903	731	0·82
1904	712	0·76

There are few references in the district reports to this disease. Dr. Campbell Gowan, in his report on the Rural District of Hendon, draws attention to the fact that four out of five deaths recorded during the year occurred in the lower-lying parts of the district, and adds :—

“This fact is in keeping with many other recorded
“observations, which tend to prove that, even in
“hilly districts, the cancer death-rate is highest in the
“valleys and least on the hills.”

He also expresses his belief in the parasitic origin of the disease.

BACTERIOLOGICAL EXAMINATIONS IN CONNECTION WITH CASES OF SUSPECTED INFECTIOUS DISEASE.

The diseases in regard to the diagnosis of which information may usefully be obtained, when the clinical symptoms are of a doubtful character or during the very early stages

of the illness of the patient, are diphtheria, phthisis and enteric or typhoid fever. In the case of diphtheria, bacteriological examination of material from the throat and nose of "contacts," that is to say, of persons who have been in association with another who is found to be suffering from the complaint, is also of considerable importance with a view to the prevention of the spread of the disease. It has been found that such persons may have suffered from what was regarded at the time as not more than an ordinary sore throat, but on bacteriological examination the diphtheria bacillus has been found to exist in their throats. Occasionally also it has been found that material from the throats of persons who have shown no signs of illness but who have been in association with patients suffering from diphtheria contains the bacillus

From the information contained in the reports it appears that in 15 districts arrangements have been made by which medical practitioners have the advantage of the assistance afforded by bacteriological examination by application to the sanitary authority, whilst in one district examinations were sanctioned by the authority during the prevalence of diphtheria.

In Hanwell, arrangements which were in force in 1903 for bacteriological examinations were discontinued during 1904.

MIDWIVES ACT, 1902.

In last year's report I gave account of the chief provisions of this Act. It is now necessary to narrate the steps which have been taken with a view to its administration in the County.

When the Act was being passed it was felt that it was necessary to make some provision enabling *existing* midwives to obtain the certificate of the Central Midwives' Board. Section 2 therefore provides that any woman who made application to the Board within two years of the coming into operation of the Act might be certified—

- (1) If she held a certificate from one or other institution recognized by the Board;
- (2) If she produced satisfactory evidence that she had been in *bona fide* practice for at least a year previous to the passing of the Act.

The period during which the provisions of Section 2 were in force ended on March 31st, 1905. Consequently no further applications from *existing* midwives can now be entertained by the Central Midwives' Board.

In order to obtain a certificate as a midwife it is now necessary that every woman shall undergo a course of training and pass an examination as laid down by the regulations of the Central Midwives' Board.

On April 1st, 1905, Section 1 (1) of the Midwives Act, 1902, came into operation. The effect of this section is that on and after the date mentioned no woman may call herself a midwife or take any title implying that she is certified under the Midwives Act.

This is in force until April, 1910, when Section 1 (2) comes into operation. This provides that:—

“No woman shall habitually and for gain attend
“women in childbirth otherwise than under the
“direction of a qualified medical practitioner, unless
“she be certified under this Act.”

In the following account I have included the facts up to the end of February, 1905.

From one and another source the names and addresses of 585 midwives in the County of Middlesex have been obtained. Of this total 312 have been certified by the Central Midwives' Board, and 273 have either not obtained or have failed to apply for certificates under the Act. The information which I have on this matter is only up to the end of February, 1905. The reason that I am not able to give the figures up to the end of March is that so many women have put off making their applications for certificates till the last two or three months, during which Section 2 was in operation, that it has not been possible for the Central Midwives' Board to publish the results later than December, 1904. The results for the two later months I am, however, able to give owing to the courtesy of the Secretary of the Board, who, at my request, lent me the Board's office copy of the list of women who have been approved since the end of last year.

I have communicated with all the women—namely, 312—who have been certified as soon as their names appeared on the Roll of Midwives, and informed them of Section 10 of the Act, which requires midwives to notify the Local Supervising Authority of their intention to practise. A certain number have replied that they do not intend to practise without a doctor. These women, I understand, are required to conform to the Rules of the Central Midwives' Board and to provide themselves with the requisite books and appliances. Others state that they are not yet in practice, and others that they are not able to fill in the form of notification as they have not yet received their certificates from the Board setting out their number

on the Midwives' Roll. Up to the present time notification of being in practice has been received from 96 women, but this number will be augmented as soon as the Central Midwives' Board are able to issue certificates to all the women who have been approved.

As regards the 273 whose names, so far, do not appear on the list of certified midwives, some of these will, later on, when the final Roll of Midwives is published, be found to have obtained certificates, but I anticipate that the majority will remain as uncertified midwives. There is, however, no reason against their attending confinements so long as they do not call themselves midwives. It will be advisable to keep in touch with such women with a view to instructing them as far as possible, although they do not come under the rules of the Central Midwives' Board.

Since I took up my duties with the Council, I have, up to the end of March, 1905, made 472 visits to midwives, partly for the purpose of supervising and examining the books and bags of appliances of those women already certified, and partly to explain the provisions of the Act to those who were already in practice at the passing of the Act but had not yet been certified. A few visits have also been made in connection with the notifications which midwives are obliged to send to the Local Supervising Authority under Section E of the Rules, as regards the occurrence of still-births or of some condition in the mother or child which necessitated her sending for medical help. Altogether 135 such notifications have been received (54 as to still-births, 81 as to sending for medical aid). It has not been possible for me to visit, in connection with these notifications, other than

those cases which appeared to need special investigation, although I consider that it is desirable that inquiry should be made into the circumstances of the case upon the receipt of *each* notification.

In connection with the notifications which have to be made under the rules of the Central Midwives' Board I would especially draw attention to those under Rules 17 (c) and 18 (3) which relate to the occurrence of fever in the mother. A midwife has to seek medical aid if the patient's temperature rises above 100·4 F., and at the same time has to notify the Local Supervising Authority of the fact that she has done so. As soon as the medical man called in is of opinion that the rise of temperature is due to the occurrence, of puerperal fever he has under the Infectious Diseases (Notification) Act to notify the case to the medical officer of health of the district. Hence it is possible that this might take place without my having knowledge of the fact. I have endeavoured to get over this difficulty by asking the local medical officers of health to inform me forthwith of all cases of puerperal fever where they have reason to think that a midwife has been in attendance, and up to the present I am glad to say that they have willingly complied with my request and have shown every readiness to assist me in the matter.

A mere numerical statement of the visits made does not convey an adequate idea of the work involved. The women are scattered throughout the County, and the mere travelling involved in visiting them takes up a good deal of the day. A certain amount of time, which varies according to the previous training of the midwife, must be spent in each case in examining the midwife's register of cases and appliances and in giving her instructions.

Part I.—The County.

Fortunately in Middlesex there are, so far, only three women among those certified who are entirely unable to write, but many of them need a considerable amount of instruction as regards how to keep their appliances clean, as to the use of disinfectants, the use of a clinical thermometer, and as to the meaning of the rules of the Central Midwives Board. Many of them find difficulty in entering up the particulars required in the register of cases, which they must keep, and fail to understand that they must notify the Local Supervising Authority under certain circumstances. It is necessary, therefore, to explain these matters, often more than once, when visiting them.

Since the above figures were got out, further notifications have been received by the County Council as Local Supervising Authority, from certified women, of their intention to practise, and the number is daily increasing.

In the course of the year a copy of a special report by Dr. Simpson, in regard to three cases of puerperal fever in Acton, was forwarded to the County Council. This is to the following effect:—

“With regard to two of the three cases of
“puerperal fever, there is reason to believe that the
“patients were infected by the nurses in attendance.
“I personally superintended the disinfection of the
“hands and arms of one nurse, and her clothing was
“also disinfected. These ignorant women who call
“themselves nurses, frequently infect the patient, and
“at present the law does not touch them, but we
“must hope that in time only properly qualified
“persons will be allowed to nurse maternity
“patients.”

Women of this class, namely, those who go out monthly nursing, do not come under the provisions of the Midwives Act or the rules applying to midwives. They attend cases in which a medical practitioner is engaged, though it no doubt happens that he is not always sent for in time to be present and attend the birth which may even take place before the arrival of the nurse. In the course of my visits to women who informed me that they did not practise as midwives but only as monthly nurses, I took the opportunity of impressing upon them with the importance of always, so far as lay in their power, having the medical man engaged to attend present as early as possible.

ISOLATION HOSPITALS.

The subject of isolation hospital accommodation needs to be considered under two distinct headings, namely: (1) the accommodation made for isolating cases of the ordinary infectious diseases usually treated in hospitals, that is, scarlet fever, diphtheria and enteric fever, and (2) the accommodation for isolating cases of smallpox.

(1) Isolation Hospitals for the Ordinary Infectious Diseases.

Dealing with the subject of hospitals in the County for cases of ordinary infectious disease it appears that—

- (a) Some authorities have either alone or jointly with others provided a hospital for the use of their districts.
- (b) Some have made arrangements (i) by which a definite number of beds in the hospitals provided by other authorities are reserved for their use, or (ii) by which patients are admitted into such hospitals when the need arises, and presumably if there are any spare beds at the time.

- (c) Some authorities have not provided accommodation and do not appear to have made any arrangements for isolating the cases occurring in their districts.

I have classified the districts in the County according as they come within one or other of the above headings, and have also got out as far as possible an account as to the hospital accommodation, or as to the need of it, in the case of each district. But before setting out the latter details it will be of advantage to give a summary of the facts relating to subject for the County as a whole.

The information available regarding each district shows that—

- (a) The following districts have provided hospital accommodation—

Acton	Hornsey
Brentford	Southall-Norwood
Chiswick	Southgate
Ealing	Twickenham
Enfield	Uxbridge (urban)
Hampton	Willesden
Harrow	Wood Green
Hendon (urban)	Hendon (rural)
Heston and Isleworth	Uxbridge (rural).

- (b) The following districts have made arrangements for the reception of cases in the hospitals of other authorities—

Edmonton	Tottenham
Finchley	Wealdstone
Greenford	Wembley.

(c) In the following districts no hospital accommodation has been provided and no definite arrangements appear to have been made for isolating cases of infectious disease—

Feltham	Staines (urban)
Friern Barnet	Sunbury
Hampton Wick	Teddington
Hanwell	South Mimms
Kingsbury	Staines (rural).

Briefly summarizing the facts, the following is a statement of the conditions which existed in the County, at the end of 1904, for the isolation of cases of ordinary infectious disease.

Of the 34 separate districts constituting the County (Hayes and Ruislip-Northwood being regarded as part of the Uxbridge rural district), in 18 districts with an estimated population of 662,448, including the estimated population (33,320) of Richmond, Surrey, which shares one of these hospitals with a Middlesex authority, the sanitary authorities have provided hospital accommodation of a permanent or temporary character; in 1 district with an estimated population of 121,279, the sanitary authority has by arrangement 100 beds reserved in a hospital situated in the district, belonging to the Metropolitan Asylums Board; in 2 districts with an estimated population of 78,922, the sanitary authorities have made arrangements with two of the above districts, by which a certain number of beds in the above hospitals are reserved for their use; in 3 districts with an estimated population of 15,232, arrangements have been made under which cases are admitted to the hospitals of some of the above Middlesex authorities.

The total number of beds existing in the above hospitals, inclusive of both permanent and temporary structures, is 683, equivalent to one bed to every 969 persons.

In 10 districts, with an estimated population of 85,654, the sanitary authorities have as yet not provided isolation hospital accommodation, nor made any definite arrangements for sending cases elsewhere, although some of these authorities appear at the present time to be carrying on negotiations with other authorities or considering the question with a view to providing means of isolation.

It is of course not to be expected that the authorities of districts with relatively small populations ranging from 1,000 to 10,000 should each provide accommodation separately, but should if possible arrange to act jointly. This no doubt is an additional difficulty in the matter. A combination of authorities and the creation of a joint hospital board suggests itself in the case of the districts in the area of the Staines Union. Friern Barnet might well approach one of the adjoining authorities with the same object. The provision of a hospital jointly by Greenford and Hanwell is suggested in the report of the medical officer of the latter. Similar arrangements might be adopted in the case of other districts.

The object of isolation is to check the spread of disease—one of the first and most responsible duties of a sanitary authority. In order to do this effectually the most important consideration is that the means of isolation shall be ready when the first cases of an outbreak occur. The second consideration is as to the proportion which such accommodation should bear to the population, and in this connection the following may be quoted from a

memorandum "On the provision of Isolation Hospital Accommodation by Local Authorities," issued by the Local Government Board:—

"The amount of permanent isolation hospital accommodation which should be provided in proportion to the population will depend upon various considerations, among the most important of which are the character of the district, whether urban or rural; the rate of increase of population; the housing and the habits of the people; and the amount of intercourse with other places from which infectious disease may be introduced. As a rough estimate, one bed for every thousand inhabitants is sometimes adopted, but in view of the diverse circumstances of different districts this cannot be regarded as a definite standard."

Judged upon this rough estimate it appears that as regards that portion of the County in which isolation hospital accommodation of one or other kind has been provided the number of beds taken as a whole comes up to the standard. As a matter of fact, however, it will be seen from the extracts given below as regards the separate districts, that the existing accommodation is not sufficient in all cases for the districts which the Hospitals serve.

As regards the remaining portion of the County, no isolation hospital provision is available for a population estimated to be over 85,000.

In a County such as Middlesex, where the population is increasing at an extraordinary rate, and in which a considerable portion of the community is as yet unprovided with hospital accommodation, this subject is one which calls for early treatment.

The particulars as to the hospitals which have been provided in the districts included under heading (a), based upon the information given by the district medical officers, are as follows:—

Acton (estimated population, 52,358).—This is a recently-built hospital, situated in the northern part of the district. The administration block is an old mansion, in the grounds of which the hospital buildings have been erected. They consist of a scarlet fever block and an enteric fever block, each containing a pavilion ward for male and a pavilion ward for female patients. There is a third pavilion for diphtheria and cases under observation. The hospital is well arranged and equipped with laundry, disinfectory, mortuary, ambulance and van sheds.

The number of beds (not including cots) is—

Scarlet fever	14 beds.
Enteric	14 „
Diphtheria	2 „
Observation cases ..	2 „
The total accommoda-	—
tion here is ..	32 „
	—

In addition to this accommodation it is stated that in case of need there are several rooms in the administration block, which, in case of emergency, could be used for enteric fever cases.

Brentford (estimated population, 15,618).—The isolation hospital was built in 1892. It contains “an excellent administrative cottage in which is the bacteriological laboratory.” The hospital

consists of one block containing four wards arranged so as to deal with at least two distinct diseases at one time. There are two wards and a duty room on each side.

A mortuary building is provided.

The accommodation here is 10 beds.

In addition to this hospital a temporary hospital was erected in the Ham in 1902. This is a corrugated-iron pavilion containing two wards and a duty room.

The accommodation here is 12 beds.

Dr. Bott states: "Having two hospitals has
" proved most useful this year as it enabled me
" to use one for infectious diseases and the
" other to keep the smallpox contacts under
" observation and thus check the spread of
" the disease."

Chiswick (estimated population, 32,177).—Isolation hospital accommodation has only recently been provided. The building was opened on April 7th, 1904, and is situated at Clayponds Lane, Brentford. It is a permanent structure and comprises an administrative block, two ward pavilions containing four wards, a mortuary and ambulance sheds. The site is ample for extension.

The accommodation is —

Scarlet fever	..	16 beds.
. Diphtheria	}	4 „
Enteric fever		
Total	..	20 „

Ealing (estimated population, 43,780).—The hospital for isolating cases of infectious disease, excluding smallpox, was erected in 1884. This building is no longer sufficient for the needs of this rapidly-increasing district, and in the report for 1903 it was stated that plans for extension had been submitted to the Local Government Board for approval. Dr. Patten states that at one time of the year during 1904, it was impossible to admit all the cases requiring admission owing to want of accommodation.

He adds :—

“ This difficulty will be met by the erection
 “ of the new hospital buildings which are
 “ rapidly approaching completion, and will
 “ be available before long for occupation.
 “ Indeed, it is anticipated that one at least of
 “ the new blocks will be available for patients
 “ in May next (1905).”

The accommodation here at present is—

Scarlet Fever	..	..	..	23
Diphtheria ..	..	..	..	3
Enteric Fever	..	..	..	3
				—
Total	..	..	..	29
				—

Enfield (estimated population 49,699).—The hospital for this district was erected in 1900, and is situated at World's End. I am not able to give a description of this hospital, but the number of beds as obtained from the reports of previous years is set out below.

An arrangement exists with the District Council of Edmonton by which 19 beds here are reserved entirely for the use of patients from this district. *See* Edmonton later.

The total number of cases admitted during 1904 was 458, of which 161 belonged to the district, and 183 to Edmonton. The remaining cases came from Wood Green 78, Finchley 8, and Friern Barnet 7, within the County of Middlesex, whilst 21 cases came from Cheshunt and Waltham Holy Cross situated without the County area.

The existing total accommodation appears to be—

Scarlatina	..	..	..	76 beds.
Diphtheria	..	..	..	13 „
Enteric Fever	..	..	..	18 „
Total				107 „

Hampton (estimated population, 7,500).—A new isolation hospital was opened in March, 1904, and, it is stated, “has proved of great service “to the district.”

The hospital consists of one pavilion with four wards, and kitchen, bathroom, and lavatories, an administrative block, a laundry and steam disinfecting apparatus, a mortuary and coach-house. A properly-fitted ambulance is also provided.

The accommodation here is

Scarlet fever	..	..	6 beds.
Diphtheria	..	..	4 „
Total			
10 „			

Enteric fever cases can be treated if necessary.

Harrow (estimated population, 12,313).—The existing hospital for this district was erected in 1894, at Newton Farm, Roxeth. A description of the building is not given, but apparently it is only capable of dealing with one infectious disease, and the inadequacy of the accommodation was felt during 1904, as during one period it was impossible to admit all cases of scarlet fever needing admission, and Dr. Fletcher Little, the medical officer of health, recommended the Council “to consider the propriety “of providing temporary additional accommodation.”

Plans for the extension of the hospital have been approved by the Local Government Board, and the erection of the new building is to be proceeded with forthwith.

The accommodation in 1904 was 5 beds.

Hendon (urban) (estimated population, 24,449, excluding institutions). — The accommodation which exists in this rapidly increasing and important district can be best appreciated by the following extracts from the report of Dr. Andrew, the Medical Officer of Health :—

“The hospital is a temporary structure,
“and consists of two large wards capable
“of properly treating four patients in each,
“but this has been exceeded in many
“instances owing to pressure of work.
“There is, in addition, a smaller ward
“capable of accommodating two. There is

“ another large ward used as a day-room for
“ convalescents, a very important addition
“ for hospital patients. At times this ward
“ has had to be used as a day and night
“ ward.”

It appears that the accommodation does not provide for the isolation of cases of diphtheria, and during the year some urgent cases of this disease were admitted into a private home, but it is stated: “great difficulty is always
“ found to get cases sent away to other
“ hospitals, and this emphasizes the importance of hospital provision being made for
“ these cases locally.”

There is obviously need for the consideration by the District Council of Hendon of this question of hospital accommodation. The facts that the population of the district is increasing, that the existing accommodation is of a temporary character, and for one disease only, and that this has at times been insufficient for the demands made upon it, indicate that the time has arrived for some permanent provision being made.

As will be seen from what is stated above, the existing accommodation is 10 beds.

Heston and Isleworth (estimated population, 32,630).—

This authority have jointly with the Borough of Richmond (estimated population, 33,320), in the County of Surrey, provided an isolation

hospital, situated at Mogden Lane, in the area of the Heston and Isleworth District Council. In last year's report Dr. Steegmann drew attention to the need which exists for enlargement, a need which appears to have existed for some time, and has led in the past to overcrowding of the scarlet fever wards. Dr. Steegmann's remarks are repeated in his report for 1904, and are as follows:—

“ I am anxious to call the attention of the
“ Council to the urgent necessity of increas-
“ ing the accommodation provided at the
“ hospital for the reception of scarlet fever
“ cases. . . .”

“ . . . I am aware that the Heston and
“ Isleworth Council is prepared to carry out
“ its duty in the matter and that the delay
“ has been chiefly caused by a difference of
“ opinion between the constituent authorities
“ as to their relative financial responsibility.”

Suggestion is made that further delay should be prevented, if necessary, by appeal to the Local Government Board.

He adds:—

“ The question of the enlargement of the
“ Hospital has been considered at various
“ times, but no practical steps whatever
“ have been taken towards having the work
“ done during the year. It has been good
“ fortune and not good management that
“ prevented a repetition of the overcrowding

“that occurred in 1903, but it is certainly
 “not wise to depend on similar fortune in
 “the future, and should the number of cases
 “of infectious disease increase next year,
 “without sufficient accommodation having
 “been provided, the Council will not be able
 “to avoid responsibility.”

The total accommodation at this hospital, allowing
 2,000 cubic feet of space per patient, is :—

Scarlet fever	..	..	34 beds.
Diphtheria	..	..	9 „
Enteric fever	..	..	2 „
			—
Total	..	..	45 „
			—

Hornsey (estimated population, 84,227).—An isolation hospital for the ordinary infectious diseases has been provided, and is situated at Coppet's Lane. The number of wards is 12 as regards which it is stated :—

“We have a number of very small wards,
 “so that the number of beds allotted to each
 “disease varies as their respective pre-
 “valence.”

A fair average apportionment is as follows :—

Scarlet fever	..	..	34 beds.
Diphtheria	..	..	10 „
Enteric fever	..	..	4 „
			—
Total	..	..	48 „
			—

Finchley has an arrangement by which 25 beds are reserved for its patients.

Southall-Norwood (estimated population 14,735, excluding asylum).—The hospital was opened early in 1904, and contains an administrative block, mortuary and laundry, an isolation and discharging block, and a pavilion block. On the site, which contains 3 acres, there is room for two future pavilion blocks, two isolation blocks, and a lodge-keeper's cottage. It is stated that 149 cases were treated and that the cost per patient, exclusive of loans and capital charges, was about £8. Parents are not only willing but anxious to send their children to the hospital for treatment.

The accommodation is as follows :—

Scarlet fever	..	13 beds.
Diphtheria ..	..	4 „
Convalescents	..	4 „, in a temporary building.
		—
		21 beds.
		—

Southgate (estimated population, 19,000). — This hospital was opened in 1902. It is situated at Tottenhall Road, Palmer's Green. The site comprises 9 acres, only part of which is at present utilized for hospital purposes. Dr. Sidney Ransome gives the following description, accompanied by an excellent sketch-plan of the buildings :—

“ The hospital consists of (1) an
 “ administration block for the staff; (2) a ward
 “ block; (3) an isolation block; (4) a laundry block
 “ with steam disinfecting apparatus and mortuary
 “ attached; and (5) an entrance lodge.

“ The following amounts were sanctioned by the
 “ Local Government Board to be borrowed for the
 “ purpose of the Hospital :—

“ (1) Purchase of land	..	..	£2,500
“ (2) Fencing, draining, etc., of site,			
“ “ and building entrance lodge			1,600
“ (3) Erecting hospital buildings	..		8,400
“ (4) Furniture	..	..	600
			<hr/>
			£13,100
			<hr/>

“ The ward block is used entirely for scarlet fever
 “ cases, and consists of two wards, one 36 ft. by 26 ft.,
 “ and 13 ft. in height, for women and children, and
 “ the other 26 ft. by 24 ft., and 13 ft. in height, for
 “ men, with a nurses' duty room between, arranged
 “ so that the nurse-in-charge can look through a small
 “ fixed window into each ward. The male ward was
 “ designed to accommodate four beds and one cot,
 “ and the female ward six beds and one cot. But the
 “ air and floor space allowed was so ample that I find
 “ I can put up two extra beds or cots in each ward
 “ and still maintain sufficient air space. Lavatory
 “ and w.c. accommodation are provided at the ends
 “ of each ward, accessible from the ward only, but
 “ provided with a cross ventilation lobby.

“ The wards are lighted and ventilated by large
 “ windows reaching to the ceiling on each side of the
 “ wards, and provided with fanlights which open
 “ inwards. Thorough cross ventilation is thus
 “ obtained. The wards are heated by special stoves
 “ in the centre of each, having downward flues
 “ carried under the floors to external chimney shafts
 “ attached to the building.

“ The floors are of two kinds, that of one ward
 “ consisting of terazzo, and the other of pitch-pine
 “ blocks. The walls are distempered with duresco,
 “ with a dado of oil paint.

“ There is also in this block a store cupboard for
“ linen, bedding, etc., and a bathroom, arranged
“ with a door leading outside, enabling it to be used
“ as a discharging-room. The bath is a portable
“ one, and mounted on rubber wheels.

“ The nurses' duty-room is fitted with a kitchen
“ stove with hot water apparatus, a sink, a small
“ larder, large cupboard, kitchen dresser, medicine
“ cupboard, and a telephone communicating with the
“ administration block.

“ The isolation block is used for diphtheria and
“ typhoid fever, and consists of two wards, or half
“ a block ; the other half to be completed when more
“ accommodation is required. Each ward is 24 ft. by
“ 18 ft., and 13 ft. in height, and accommodates three
“ beds and a cot in each ward. A duty-room similar
“ to that of the ward block is provided between the
“ wards. The sanitary accommodation is outside and
“ separate from the block, but is under a veranda
“ which runs along one side of the block. The doors
“ of the wards and duty-room open on to this veranda
“ only. These wards are heated by open regener-
“ ating grates, and lighted and ventilated by windows
“ similar to those of the ward block.

“ All angles of walls, floors, ceilings, and wood-
“ work in both blocks are constructed with rounded
“ surfaces.

“ The Administrative Block contains dispensary,
“ Matron and Nurses' sitting-room, storeroom,
“ kitchen, scullery, coal store, and bedrooms, for nine
“ persons,—the nursing staff and servants. The
“ building is so designed that it can readily be
“ enlarged to accommodate an increased staff.

“ The Laundry Block is supplied with a high-
“ pressure boiler, which supplies steam for boiling all
“ water required in the Laundry. All steeping and

“ washing of clothes is done in glazed stoneware
“ troughs. A set of clothes-horses on runners is
“ provided in a special chamber, heated with steam
“ for drying and airing clothes and linen when out-
“ door drying is unavailable. The same boiler also
“ supplies steam for the steam disinfecting apparatus.
“ Adjoining the Laundry is a mortuary.

“ The Entrance Lodge contains a parlour, kitchen-
“ living-room with enclosed sink and bath, and one
“ bedroom with usual accommodation, all under one
“ roof and on the ground floor.”

Dr. Ransome also sets out particulars as to the use of the hospital during the year, and adds:—

“ On one occasion it was impossible to take in a
“ case that required it. This was due to the fact
“ that the isolation block is only half completed, and
“ I am of opinion that, taking into consideration the
“ rapidity with which the population of the district
“ is increasing, it is very desirable that the other half
“ of the block should be completed as soon as
“ possible. At the present time the two wards of
“ this block have to accommodate both diphtheria
“ and typhoid fever, whereas for two separate
“ diseases two wards each are required, one for male
“ and one for female cases.”

The accommodation here is 18 beds.

Twickenham (estimated population, 26,000).—It appears that the District Council have continued the tenancy of a temporary hospital. Last year it was reported that application for a loan to acquire land for the erection of a hospital had been refused by the Local Government Board, apparently owing to the proximity

of the proposed site to the Hounslow Powder Mills. It is not stated whether further action has since been taken in the matter. The building in use is a permanent structure erected 30 years ago, and situated in The Mereway. It contains 3 wards in use and other rooms are available if necessary. It is used for scarlet fever only. No further information.

The accommodation here is 30 beds.

Uxbridge Urban and Uxbridge Rural (estimated population, 8,918 and 18,206). — These two authorities have formed a Joint Hospital Board which provided an isolation hospital for the use of the two districts in 1882. At the latter end of 1904 the two parishes of Hayes and of Ruislip - Norwood were separated from the rural district of Uxbridge and became separate urban authorities, and up to the end of the year no order had been made by the Local Government Board as to whether they should form constituent authorities in the Hospital Board. The population of the two districts is, however, included in the figures given above relating to the rural district. The following extract from the report of Dr. Charpentier, the Medical Officer of Health of the Uxbridge Rural District, briefly describes the existing accommodation :—

“ The isolation of scarlet fever and diph-
“ theria is carried out at the Joint Hospital
“ in Hillingdon East, but, as has been pointed
“ out in these reports for years, the hospital

“ is overcrowded. There are 5 wards for
“ scarlet fever, to hold 18 patients, and in
“ these there are 9 beds and 20 cots. For
“ diphtheria there are 3 wards to hold 8
“ patients, and in these are 13 beds and 10
“ cots. There have been as many as 40
“ patients under treatment at one time.
“ But it is a choice of evils whether the
“ patients should be left outside to dis-
“ seminate the disease wholesale or should
“ be allowed to overcrowd the hospital. Dr.
“ Davidson and I agreed that the latter was
“ the less of the two evils. The other
“ alternatives are, either the hospital
“ accommodation should be much increased
“ or the district should be limited to the
“ present rural district and the Uxbridge
“ Urban District.”

No proper steam apparatus for the disinfection of clothing exists, and the laundry building is badly in need of repair and alteration.

From the above extract it appears that the proper accommodation here is 26 beds.

Willesden (estimated population, 134,539).—The hospital provided by this authority has recently been undergoing considerable alteration and extension. These extensions were finally completed in October, 1904. Dr. Stewart, the Medical Superintendent, in his report, states:—

“ The hospital consists now of ten blocks of buildings
“ not including, however, the two iron buildings—the

“In ‘E’ block there are 16 beds for scarlet fever.

“In ‘F’ & ‘G’ block there are 40 beds for scarlet
“fever.

“In ‘H’ & ‘H₁’ block there are 12 beds for
“observation purposes.”

.

“Immediately behind the administration block and
“between it and the wards, but quite separate from
“the latter, the discharge block is situated. This
“consists of three rooms leading into one another.
“It is through these rooms that patients pass during
“their final disinfection preparatory to being dis-
“charged from hospital. The patient invariably
“enters at one end of the series and leaves by the
“other. In the entrance room he removes all his
“infected clothing. Having done this, he passes into
“the second room (the bath room), where he is
“disinfected. He then passes on to the third room,
“where he puts on his outdoor garments, finally
“passing into the open air by a second door in this
“particular room.”

The accommodation in the permanent part of this
hospital is 122 beds, but in addition at least 12
beds can be put up in the iron structure.

Total 134 beds.

Wood Green (estimated population 40,930).—The
following extract from the annual report of
Dr. Conolly, the medical officer of health,
shows the existing state of affairs in this
district:—

“The Council’s Isolation Hospital, which
“is rented from Stoke Newington, is a
“corrugated iron building built to accommo-
“date 12 scarlet fever patients in two wards

“of six beds each. Although it has done
 “good work in tiding over an emergency it
 “is quite inadequate for the needs of the
 “district.

“The number of scarlet fever cases was
 “last year below the average, and no
 “difficulty arose in dealing with them, but
 “even a slight increase above the average
 “would cause a serious strain on our
 “resources.

“The Enfield Council has received during
 “the year most of our diphtheria patients
 “who required isolation. The arrangement
 “with Enfield is, however, of a temporary
 “nature, and is liable at any moment to
 “cease, leaving us without means of isolating
 “diphtheria.”

.

The average cost for each patient was :—

“Council’s Hospital	£16	3	7½	or
		2	6	3 per week.
“Enfield	9	14	3	at the rate of
	2	9	0	per week.”

It appears, however, that land on which a hospital
 can be erected is possessed by the District
 Council, and that a report as to the cost of
 building and furnishing a hospital was drawn
 up and placed by the Chairman of the Hospital
 Committee before the District Council.
 Dr. Conolly adds in his report—

“The Council, however, determined not to
 “continue with this scheme for the present,

“but to continue certain negotiations that
“had already been commenced with
“Hornsey.”

The present temporary accommodation is 12 beds.

Hendon (rural) (estimated population, 11,046).—The hospital was opened in 1902, and is situated in Honey Pot Lane. The accommodation is for scarlet fever and diphtheria. There being two ward blocks with two wards each. There is a good administrative block and the hospital is well equipped with laundry, steam disinfecting apparatus, and mortuary.

The accommodation here can, if necessary, be increased, without lowering the amount of cubic space per bed below the usually accepted standard, to 18 or 20 beds and cots, but nominally the accommodation is 14 beds.

The arrangements which have been made by the six districts enumerated under heading (*b*) are as follows:—

Edmonton (estimated population, 53,358) has an arrangement with Enfield District Council by which 19 beds are reserved for the use of Edmonton patients. Steps were taken during 1904 to unite with Enfield and to form a joint Hospital Board.

Finchley (estimated population, 25,564) has an agreement with Hornsey since 1903 by which 25 beds are reserved in the hospital of the latter authority for patients from Finchley.

Greenford (estimated population, 1,092) has arranged for the admission of cases to the hospital of the Ealing Borough Council.

Tottenham (estimated population, 121,279) has an arrangement with the Metropolitan Asylums Board whereby 100 beds are set aside in the North Eastern Fever Hospital which is situated in Tottenham, for patients from Tottenham.

Wealdstone (estimated population, 8,940) has an arrangement with the Hendon Rural District Council by which beds in Hendon Hospital are available when required.

Wembley (estimated population, 5,200) sends cases to Willesden Isolation Hospital at a fixed charge per patient. Dr. Goddard writes as regards isolation hospital accommodation that the erection and maintaining of such has not been deemed necessary, inasmuch as the total number of cases has never reached the number that would justify this course, and that the arrangement which exists with the District Council of Willesden meets the requirements. He adds that a suitable site for a hospital will no doubt be required in a few years.

As regards the ten districts which have been set out as not having provided a hospital for the use of their districts, or not having made any definite arrangements for the ready removal of cases of

infectious disease when they occur, I would draw attention to the following remarks made in the annual reports :—

Friern Barnet (estimated population, 9,758, excluding Asylum).—Dr. Spreat states :—

“ The district not being provided with an
“ isolation hospital, and not having any
“ arrangement or agreement with any
“ outside authority, beds are procured when
“ possible from the surrounding authorities,
“ Enfield, Hornsey, Southgate and Hendon.
“ I have again to point out that with the
“ increase of the population, not only of
“ Friern Barnet, but of the surrounding
“ districts, the want of definite accommodation
“ will be felt more and more. At times there
“ is delay and great difficulty in getting beds
“ as at times of epidemics, when beds are
“ most required, the surrounding districts are
“ generally affected by the same attack, and
“ then require the whole of their accommoda-
“ tion for themselves. Twenty-four cases
“ were removed to various hospitals :
“ Southgate, 16 ; Enfield, 6 ; and the Metro-
“ politan Asylums Board, 2.”

Hampton Wick (estimated population, 2,606).—

Dr. Günther states :—

“ I am glad to be able to report that
“ negotiations have commenced with the
“ Hampton District Council to give this

“ district accommodation for infectious
“ diseases, and I hope the two authorities
“ will come to a satisfactory agreement.”

Hanwell (estimated population, 18,000).—Dr. Hope expresses the desire that accommodation will soon be provided, and suggests that this might with advantage be done by Hanwell and Greenford in conjunction.

Staines (urban) (estimated population, 6,856).—Dr. Tothill draws attention to the fact that there has been little notifiable disease during the last two years, but points out that as a susceptible population grows up, there will be risk of a scarlet fever epidemic. In the year 1899 there was a considerable amount of this disease in the district, 68 cases having been notified as compared with 1 case in 1898, and in his report for that year, Dr. Tothill stated “ the number of cases of infectious
“ disease emphasizes the need for an isolation
“ hospital,” a need which had been specially referred to in the reports for 1895, 1894, and 1893. See later remarks in reference to Staines (rural) and Sunbury.

Teddington (estimated population, 16,000).—Negotiations, it is stated, are pending with the Hampton District Council with a view to obtaining isolation accommodation at the hospital of the latter authority.

Feltham (estimated population, 5,560).—This district was only newly created in April, 1904. No hospital accommodation yet exists. See remarks under *Staines (rural)* and *Sunbury*.

Staines (rural) (estimated population, 18,737).—Dr. Morris, the medical officer of health, writing on the outbreaks of diphtheria and scarlet fever which occurred during 1904, draws attention to the great need which exists for isolation hospital accommodation, and it appears from the following remark in his report that the question is being discussed with a view to joint action by the districts of *Staines urban* and *rural*, *Feltham* and *Sunbury*:—

“The question for a properly equipped
“general isolation hospital is at the present
“time under consideration, and a conference
“recently held at *Sunbury* was attended by
“representatives from the *Urban Districts of*
“*Staines and Feltham, Staines (rural), Staines*
“*Board of Guardians, and Sunbury (urban).*
“It was generally agreed at that conference
“that isolation hospital accommodation
“was desirable, and further consideration of
“the same was postponed until after the
“local elections, after which it proposed to
“further discuss the scheme of forming a
“conjoint Hospital Board.”

Sunbury (estimated population, 4,580).—In this district the need of isolation hospital accommodation appears to have been sorely felt during

the year owing to the presence of diphtheria, and Dr. Morris makes the following remarks in connection with the recurrence of the disease in various parts :—

“ This of course would have been very
“ different had we the means of more perfect
“ isolation, as is obtained in a properly
“ equipped hospital where special precautions
“ would be taken to prevent cases from
“ rejoining their families before they were
“ quite free from suspicion.

“ Another argument in favour of an
“ isolation hospital is the fact that the
“ present epidemic has been rife amongst the
“ artisan class, who, as a rule, cannot afford
“ a prolonged medical attendance, and
“ consequently cases are to a certain extent
“ allowed to drift and become a source of
“ danger to the community.

“ As a temporary measure, I advised that
“ a certain cottage might be taken in Oil
“ Mill Lane, to convert into a temporary
“ hospital, but you did not agree with my
“ suggestion.”

Further on Dr. Morris adds—

“ I venture to say, without fear of
“ contradiction, that had those cases which
“ ended fatally been placed under more
“ favourable conditions, many would have

“ been saved. This power of further saving
“ valuable lives rests with you, by making
“ the necessary provision.”

From what has been said there is obviously great need for the provision of means of isolation in the four districts of Staines (urban), Staines (rural), Sunbury, and Feltham, and during the year 1904 the need for this was acutely felt, owing to the considerable prevalence of diphtheria, and, to a less extent, of scarlet fever in Staines and Sunbury.

All these districts adjoin each other and together form the area of the Staines Union, and it is to be hoped that the need of isolation hospital provision, which has been referred to in the reports of one or other of the local medical officers of health for several years past will now be remedied as result of the conference which has been called for the purpose of discussing the question.

South Mimms (estimated population, 2,766).—No hospital accommodation has been provided, nor, so far as information is available, have any definite arrangements been made for the removal of cases to the hospital of any other authority.

(2) *Means of Isolation for Smallpox.*

For isolating cases of smallpox the following steps were taken during the recent prevalence of the disease, and no doubt the arrangements then made are still in force.

A large number of sanitary authorities send cases to the smallpox hospital at South Mimms. They include the following :—

Acton.	Hendon (urban).
Brentford.	Southgate.
Chiswick.	Wood Green.
Edmonton.	Hendon (rural).
Enfield.	Tottenham.
Friern Barnet.	South Mimms.
Harrow.	Wealdstone.

The following districts have joint hospitals :—

Ealing	} a joint hospital at Greenford.
Greenford	
Hanwell	
Hampton	} a joint hospital.
Hampton Wick ..	
Teddington ..	
Staines (urban) ..	} a joint hospital at Stanwell.
Feltham	
Sunbury	
Staines (rural) ..	
Uxbridge (urban) ..	} a joint hospital at Yeading.
„ (rural) ..	
Southall-Norwood	

Finchley has a hospital to which Hornsey sends cases.

Willesden has a temporary hospital to which Kingsbury sends cases.

Twickenham sends cases to Cheam smallpox hospital.

The district of Heston and Isleworth has a smallpox hospital jointly with Richmond, Surrey. It is situated at Dockwell Lane, Heston. During 1904 all the buildings were cleansed and repainted and a new mortuary and shed for the ambulance were built.

Wembley provides a cottage at Alperton.

In connection with this subject, however, it is necessary to say that action was being taken during 1904 by several district authorities with a view to the provision of permanent smallpox hospital accommodation, and early in 1905 this resulted in 13 authorities in the County agreeing to make application to the Local Government Board for a Provisional Order constituting them a Joint Hospital Board for the purpose of providing a hospital or hospitals for dealing with cases of smallpox. The Provisional Order applied for was made by the Local Government Board on May 13th, 1905.

In the following table is set out the number of cases of infectious disease reported to have been removed to hospital from each district and for each disease during 1904:—

CASES OF ORDINARY INFECTIOUS DISEASE REMOVED TO
HOSPITAL DURING 1904.

	Smallpox.	Scarlet Fever.	Diphtheria.	Membranous Croup.	Typhus.	Enteric.	Total.
<i>Urban.</i>							
Acton	2	40	7	..	..	4	55
Brentford	12	53	4	..	..	20	89
Chiswick .. ..	..	78	24	..	..	12	114
Ealing (<i>Borough</i>) .. ..	..	141	3	..	..	3	147
Edmonton	4	132	23	..	..	22	181
Enfield	1	111	38	..	..	8	158
Feltham .. ..	..	..	..	..	..	..	..
Finchley .. ..	..	116	38	..	..	2	156
Friern Barnet .. ..	..	20	4	..	..	..	24
Greenford .. ..	..	..	..	..	..	..	..
Hampton .. ..	..	37	8	..	..	..	45
Hampton Wick .. ..	..	..	..	..	..	..	..
Hanwell .. ..	..	..	..	..	..	..	..
Harrow	1	28	..	..	..	..	29
Hendon	1	83	2	..	..	..	86
Heston & Isleworth .. ..	..	49	27	..	..	6	82
Hornsey (<i>Borough</i>) .. ..	..	133	56	..	..	3	192
Kingsbury .. ..	..	2	..	..	..	..	2
Southall-Norwood .. ..	..	145	17	..	..	8	170
Southgate .. ..	..	77	5	..	..	2	84
Staines .. ..	..	..	..	..	..	..	..
Sunbury .. ..	..	..	..	..	..	3	3*
Teddington .. ..	..	..	..	..	..	..	..
Tottenham	22	243	117	..	..	15	397
Twickenham .. ..	..	55	..	..	..	..	55
Uxbridge .. ..	..	11	2	..	..	..	13
Wealdstone	1	16	5	..	..	..	22
Wembley	1	..	1	..	..	..	2
Willesden	12	242	290	..	..	12	556
Wood Green .. ..	..	67	80	..	..	3	150
<i>Rural.</i>							
Hendon .. ..	..	9	2	..	..	..	11
South Mimms .. ..	..	..	..	..	..	..	..
Staines .. ..	..	..	..	..	..	..	..
Uxbridge .. ..	..	25	17	..	..	..	42

* Removed to Richmond Hospital.

DISINFECTION.

In considering the subject of methods of disinfection after the occurrence of cases of infectious disease, it is necessary to do so in relation to—

- (a) The disinfection of rooms.
- (b) The disinfection of articles of clothing, bedding, &c.

From the information set out in the following table, it will be apparent that as regards the former, it is almost universally the practice in the County to use formalin by means of fumigation or as spray, or to adopt both methods. Where it is found necessary the walls of rooms are stripped and ceilings cleansed.

For the disinfection of articles of clothing most of the district authorities have now provided one or other type of steam disinfecting apparatus. Where the authority possesses an isolation hospital, the apparatus is usually provided in connection with it, and the articles needing disinfection are conveyed there in suitable vans or hand trucks, and after they have undergone disinfection are returned to the owners in separate vans used only for disinfected articles.

METHODS OF DISINFECTION IN USE.

District.	Rooms.	Articles of Clothing, Bedding, etc.	Remarks.
Acton ..	Sprayed with formalin and then fumigated for six hours with formalin	Steam disinfecting apparatus (Washington Lyon) at Isolation Hospital	Two vans, one for infected, other for disinfected articles.
Brentford ..	No details given as to methods in practice	Steam disinfecting apparatus at Isolation Hospital.	
Chiswick ..	" "	" "	
Ealing ..	" "	Steam disinfecting apparatus.	
Edmonton ..	Sprayed with formalin (1 in 40)	" "	Two transport vans.
Enfield..	No details ..	" "	
Feltham ..	Spraying and fumigation with formalin	No steam apparatus. Exposed in room during fumigation.	
Finchley ..	" Walls stripped and cleaned if necessary	Steam disinfecting apparatus (Equifex).	

METHODS OF DISINFECTION IN USE—continued.

District.	Rooms.	Articles of Clothing, Bedding, etc.	Remarks.
Friern Barnet..	Spraying with formalin and sulphur fumigation. Cleaning if necessary.	Sent to Finchley.	
Greenford ..	Information not given ..	Information not given.	
Hampton ..	No details given as to methods in practice	Steam apparatus at Isolation Hospital.	
Hampton Wick ..	" "	No details given.	
Hanwell ..	Formalin spray ..	By arrangement with Faling use of the steam apparatus here is available	The arrangement for the disinfection of clothing is commented on by the medical officer as unsatisfactory and expensive.
Harrow ..	Formalin spray and fumigation	Steam disinfecting apparatus at Hospital.	
Hendon ..	" "	Steam disinfecting apparatus.	
Heston and Isleworth	No details given as to methods in practice	" "	
Hornsey ..	" "	" "	

METHODS OF DISINFECTION IN USE—*continued*.

District.	Rooms.	Articles of Clothing, Bedding, etc.	Remarks.
Kingsbury ..	Formalin spray and fumigation. Cleansing of walls, &c., if necessary	No information given.	Two transport hand trucks. If case is treated at home the walls of rooms are stripped and scraped.
Southall-Norwood	Fumigation with sulphur. Walls, floor, and ceiling are brushed over, and woodwork washed with solution of chloride of lime	Steam disinfecting apparatus at Hospital	
Southgate ..	Formalin spray and fumigation. Walls stripped and rooms washed	Steam disinfecting apparatus at Hospital	Two transport vans.
Staines (urban) ..	Sulphur fumigation	No steam disinfecting apparatus.	
Sunbury ..	Formalin fumigation	" "	
Teddington ..	No details given as to methods in practice	No information.	
Tottenham ..	" "	Steam disinfecting apparatus provided.	

METHODS OF DISINFECTION IN USE—continued.

District.	Rooms.	Articles of Clothing, Bedding, etc.	Remarks.
Hendon (rural).	Formalin spray and formalin fumigation. Floors washed with Pynerozone	Sprayed with formalin and fumigated, or disinfected in steam apparatus at Hospital	Special bed van.
South Mimms (rural)	No information	No information.	
Staines (rural)..	Formalin fumigation (Ligner's apparatus)	No steam apparatus provided.	
Uxbridge (rural)	Sulphur fumigation and after smallpox formalin fumigation as well	.. ..	It is again reported that "a steam disinfectant is badly needed."

METHODS OF DISINFECTION IN USE—*continued.*

District.	Rooms.	Articles of Clothing, Bedding, etc.	Remarks.
Twickenham ..	No details given as to methods in practice	No information.	It is stated that a steam disinfecter will be pro- vided in conjunction with Joint Hospital Board.
Uxbridge ..	„ „	No steam disinfecting apparatus	
Wealdstone ..	Formalin spray and sulphur fumigation	Steam disinfecting appa- tus with formic aldehyde added.	It is suggested by the medical officer that the situation of the disinfect- ing apparatus is not a suitable one. The methods of disinfect- tion were reorganized during the year.
Wembley ..	Formalin spray and forma- lin fumigation	Steam disinfecting appa- tus in basement of office	
Willesden ..	Formalin spray	Steam disinfecting appa- tus at Hospital	
Wood Green ..	No details given as to methods in practice	Steam disinfecting appa- tus.	

It will be gathered from the above that no steam disinfecting apparatus has been provided in several of the districts, and from the information available it is not possible to say that the sanitary authorities of these districts have made arrangements by which this method of disinfecting articles of clothing, bedding, etc., is available for the residents. In connection with this matter I would draw attention to the fact that, under the rules framed by the Central Midwives Board, the following one occurs in connection with the occurrence of puerperal fever in the practice of a certified midwife, or her exposure to infectious disease.

Rule E (5). Whenever a midwife has been in attendance upon a patient suffering from puerperal fever, or from any other illness supposed to be infectious, she must disinfect herself and all her instruments and other appliances, to the satisfaction of the *local sanitary authority*, and must have her clothing thoroughly disinfected before going to another labour. Unless otherwise directed by the local supervising authority, all washable clothing should be boiled, and other clothing should be sent to be stoved (by the local sanitary authority), and then exposed freely to the open air for several days.

HOUSES. HOUSING OF THE WORKING CLASSES ACT.

An important matter in a county like Middlesex, where such rapid extension is taking place in housing accommodation, is that the sanitation and construction of houses, their arrangement in regard to open space, and the laying out of streets shall be adequately controlled and be subject to such requirements as will tend to prevent the creation of slum areas which would later on have to be dealt with, probably at great expense, by the sanitary authority.

Section 157 of the Public Health Act, 1875, gives powers to urban local authorities, enabling them by means of by-laws, to make requirements with this end in view. This section gives powers to frame by-laws dealing with the width and construction of streets, the structure of premises, the sufficiency of open space, and the drainage, etc., of buildings. These powers are extended by Section 23 of the Public Health Acts (Amendment) Act, 1890.

In all the urban districts in Middlesex by-laws as to new streets and buildings have been adopted.

So far as information is available, in only one district was it found to be necessary to take action for contravention of these, viz., Twickenham. It is stated that:—

“Several owners of property erected buildings in
“the rear of their premises, thereby curtailing the
“air space prescribed by the by-laws. Notices were
“served calling upon such owners to show cause why
“such buildings should not be altered, removed, or
“pulled down. The Council were successful in
“inducing the owners to remedy the causes of
“complaint.”

In the following a brief account is given, based on the local reports, of the conditions existing and the action taken during the year in regard to houses and under the Housing of the Working Classes Acts. Details as to the number of inspections made, &c., will be found in the tables at the end of this report compiled from the returns forwarded by each medical officer.

Acton.—Part III. of the Housing of the Working Classes Act has been adopted but has not been

utilised. Dr. Simpson expresses the following opinion, viz., that it is doubtful if the

“ Council could build houses to let at rents
“ much less than is being charged by private
“ owners,”

and recommends in preference that existing houses should be bought and fitted up as may be necessary.

In last year's report Dr. Simpson stated that he had made representations under the Housing of the Working Classes Act as regards property known as Cock and Crown Yard. He now writes :--

“ I think you were wise, in your decision, to
“ purchase the Cock and Crown Yard property,
“ as, besides abolishing an unhealthy area, it will
“ be a general municipal improvement, and has
“ avoided the proceedings and litigation that
“ invariably follow closing and demolition
“ orders.”

Brentford.--Dr. Bott writes :—

“ In an ancient town like Brentford, which is
“ so close to London and largely peopled by the
“ working classes, the great problem is how to
“ provide decent accommodation at a reasonable
“ rent. Constant supervision has been exercised
“ for years by the Sanitary Committee and your
“ officers. Bad cottages have been condemned
“ and closed, back-to-back tenements have been
“ opened up so as to give through ventilation,

“water has in all cases been laid on and owners
“have been compelled to keep their houses
“clean and wholesome; but although much has
“been done more is still required.”

Chiswick.—Dr. Dodsworth reports that under the Housing of the Working Classes Act two schemes are under consideration. One of these is at Strand-on-the-Green, and the other in Dalton Road. The latter consists of a block of 29 houses which, although fairly well built a few years ago, have been allowed to get into an unsatisfactory condition. Several cases of enteric fever were notified from this locality. Reference is again made this year to Essex Place. Dr. Dodsworth made two house-to-house inspections here. Some of the houses are very old. Notices were served, and the premises are now in a habitable condition. A system of house-to-house inspection has been organized

“which ensures the inspection of practically
“every artizan dwelling at least once a year
“or oftener.”

Ealing.—No special remarks.

Edmonton.—Dr. MacFadden, writing on the subject of new houses, states :—

“Large numbers of new houses continue to
“be built in the district, and it is satisfactory
“to notice that some of these have been con-
“structed of a size and at a weekly rental that
“will put them within the reach of the low-
“wage earner whose family is still young.

“The Council’s by-laws are carried out under
“the supervision of the Building Inspectors, by
“whom the drains are water-tested. On their
“completion, and before they are occupied, all
“new houses are visited by me, to ascertain
“their general fitness for habitation. In the
“great majority of instances the only point
“that remains for me to determine on these
“occasions is the condition of the inside
“plastering as regards dampness. In a certain
“number of cases I have found it necessary to
“defer the date of occupation for varying
“periods to enable the plaster to set and dry
“sufficiently to prevent danger to the health of
“the ingoing tenants.”

The number of premises inspected was 631.

Several houses were closed during the year owing to their dilapidated condition, and proceedings under Section 32 of the Housing of the Working Classes Act were taken regarding houses in Eaton Place.

Enfield.—Dr. Ridge states:—

“I inspected 2 houses in Carterhatch Lane and
“reported them as unfit for habitation; they
“have since been closed by magistrate’s order.”

Feltham.—Dr. Morris states that:—

“There is need for more cheap houses for the
“working classes, and that this should be had
“in mind by the newly-created Urban District
“Council in framing by-laws.”

Finchley.—The sanitary inspector refers to the insanitary condition of 28 houses in East Finchley, known as Field's Estate. Owing to certain legal difficulties considerable delay occurred in having the necessary work done, and during this period some of the houses which were unfit for habitation were voluntarily closed. At the end of the year work was in hand and much improvement had been effected.

Friern Barnet.—No special reference.

Greenford.—No special reference.

Hampton.—Dr. Wentworth Tyndale writes on this subject :—

“ Five houses which were in an unsatisfactory
“ condition were closed by the owners; these
“ and four others—previously closed by order
“ of the Magistrates—have been demolished.”

In one instance it was necessary to take proceedings in order to get work done. These were successful.

Hampton Wick.—Dr. Günther refers to the difficulty connected with old and worn-out cottages in the district, which have been occupied for many years by the same tenants, and whose displacement would be a hardship, especially owing to the absence of other premises suitable for them. His remarks are as follows :—

“ Special attention was given to the cottages
“ in Old Bridge Street, Fenner's Cottages,
“ Newman's Cottages, Swan Alley, a few
“ cottages in Park Road, and Feltham Cottages.
“ In some of these cottages sanitary defects

“ arise from time to time, which are remedied
 “ or else repairs have to be carried out in order
 “ to render the cottages habitable. This state
 “ of affairs usually lasts for a short time, when
 “ other defects, sanitary or otherwise, appear.
 “ The inhabitants of these cottages are in most
 “ cases tenants of long standing, who make no
 “ complaints. The construction and condition of
 “ some of their cottages is such that nothing
 “ short of demolition would be an adequate
 “ remedy. This I do not recommend, as most
 “ of the inmates are old inhabitants, who obtain
 “ their livelihood in the district and who would
 “ not be able to live in other cottages in this
 “ district even by paying an exorbitant rent, as
 “ there are none available.”

Hanwell.—No comment.

Harrow.—Dr. Fletcher Little draws attention to the high rents, in proportion to their earnings, which have to be paid by the working classes.

Hendon (urban).—Not commented on.

Hornsey.—No remarks.

Kingsbury.—No remarks. This is a very small district.

Southall-Norwood.—This is a district in which house-building is extensively taking place. Thus in 1900 the number of inhabited houses on the rate books was 2,045, whilst in 1904 it had increased to 3,328. This being so, it is an important matter that constant supervision should be exercised by the local authority. Dr. Windle writes:—

“Building operations are still being carried
“out on an extensive scale, especially in the
“West Ward, and the type of houses erected
“is better, both in construction and accommo-
“dation, than has hitherto been the case. The
“fact that all buildings in course of erection
“are constantly supervised by the Surveyor
“and Building Inspector has doubtless con-
“tributed to this end.”

Southgate.—Dr. Ransome in his report for last year drew attention to the fact that old cottages were being pulled down to make room for villa and shop property, and suggested the desirability of provision of dwellings by the sanitary authority under the Housing of the Working Classes Act. He again urges the necessity of providing suitable dwellings under the Act, and adds:—

“As I have several times urged before, there
“is no more useful or necessary sanitary
“measure you could undertake.”

Staines (urban).—Dr. Tothill states that there is ample house accommodation available, but that—

“There is still some old property in the
“town, notably in Tilley’s Lane, which requires
“considerable improvement to make it habit-
“able.”

Sunbury.—Dr. Morris reports as follows:—

“Old and defective property known as
“Bridge Place, some 16 houses, was reported on
“by me in April as unfit for human habitation,

“but, owing to certain difficulties of owner-
“ship, you did not proceed against them
“until September, when an order was obtained
“for closure, a second application being neces-
“sary to get the tenants out of some of them.
“The new forms issued by the Local Govern-
“ment Board should make the matter much
“easier in future in more rapidly dealing with
“such very dangerous property. There are
“other properties sailing very close to the
“wind which must soon be dealt with.
“Cottages on the Cedars Estate were also
“dealt with and upon representations being
“made to the owner the houses were closed
“and demolished. This estate is now to be
“utilized for building purposes.”

Teddington.—Dr. Günther recommends the District Council

“to consider the desirability of providing
“healthy houses for the working classes at a
“reasonable cost. As the rent of cottages is
“at present very high in the district, the poor
“have to pay about one-third of their wages in
“rent.”

Tottenham.—It is stated that there is a considerable amount of “slum” property which engages much time of the sanitary staff

“as no sooner have some repairs been effected
“as a consequence of one inspection, than we
“find others necessary in the course of
“reinspection after a very short period.”

During the year nine houses were closed as unfit for human habitation, six of these as the result of legal proceedings by the sanitary authority. A scheme for the erection of Artizans' Dwellings, under the Housing of the Working Classes Act, has been abandoned.

A description is given of the houses which are being erected on an estate at Lordship Lane by the London County Council, and it is stated that 141 houses have been finished, and that 27 were in occupation.

The total area of the estate is 225 acres, and it is proposed to erect 5,779 cottages. The total accommodation will be for 42,500 persons.

Twickenham.—Proceedings for closing orders in regard to two houses unfit for human habitation had to be taken.

Uxbridge (urban).—It is reported that improvements have been effected in the "yards" off the main streets. Drainage and paving of the ground has remedied much of the dampness of the houses.

Wealdstone.—Attention is drawn to the high rents of working class tenements. During recent years "flats" have been erected in this district, and Dr. Butler writes as to these :—

"I hope the Council will do all in their power
"to discourage the building of flats, which are
"conducive neither to health, sanitation, nor
"proper family life, but seem, on the other

“ hand, to have a bad influence in the causation
“ of infectious sickness. We have no common
“ lodging-houses in this district.”

Wembley.—No special remarks.

Willesden.—Dr. William Butler reports that more proceedings under the Housing of the Working Classes Act were taken during 1904 than hitherto. Representations were made under Part II in respect of 35 houses. In 5 instances the houses were closed, in 3 the notices (under the Act of 1890) were complied with, in 23 houses work was in progress, and as regards 4 proceedings were authorized.

In addition to the above Dr. Butler appends a copy of a special report which he presented as regards a small area known as Alpha Place, Alpha Place North, Alpha Place West, and Alpha Mews. These premises are badly arranged, and it is stated:—

“ The circulation of air in and around the
“ houses is most seriously obstructed, and the
“ lighting is defective. The rear space, such as
“ it is, and where there is any, is largely
“ covered in by obstructive buildings.”

He discusses the feasibility of dealing with the area as an unhealthy one under the Housing of the Working Classes Act, as compared with the possibility of obtaining satisfactory results by private negotiation with the owners and freeholders.

Wood Green.—No special comment.

Hendon (rural).—Dr. Campbell Gowan reports :—

“ During the past year 200 houses have been
“ built, the majority of them of the villa type.
“ Very few artisans’ dwellings have been
“ erected, and these few are rented at a high
“ figure. There is great need for a vastly in-
“ creased number of the latter dwellings.

“ Under the Housing of the Working Classes
“ Act, no proceedings have had to be taken.”

OVERCROWDING.—HOUSES-LET-IN-LODGINGS.

The subject of overcrowding can with advantage be considered in connection with that of houses-let-in-lodgings, inasmuch as one of the most important reasons for having by-laws specially dealing with this class of premises is to prevent overcrowding.

Further, it will be seen from the comments of the District Medical Officers of Health in their annual reports referred to below that it is suggested by some that in order to deal effectually with overcrowding the enforcement of by-laws as to houses-let-in-lodgings is necessary.

Model by-laws relating to houses-let-in-lodgings have been drawn up by the Local Government Board for the guidance of local authorities, and under Section 8 of the Housing of the Working Classes Act, 1885, every sanitary authority is empowered to make such by-laws. The matters for which by-laws may be made are the following :—

- (a) For fixing and from time to time varying the number of persons who may occupy a house or a part of a house, which is let in lodgings, or occupied by members of more than one family.

- (b) For registration.
- (c) For inspection.
- (d) For enforcing drainage and privy accommodation.
- (e) For promoting cleanliness.
- (f) For precautions against infectious disease.

Under the first clause a minimum amount of cubic space per head can be required, and in the model by-laws the amount suggested is—

300 cubic feet per head in sleeping rooms, and
400 cubic feet per head in rooms used both as sleeping
and living rooms.

For children under 10 only half of the above amounts are required.

The model by-laws also contain a clause by which it is possible for a local authority to exclude certain classes of houses in the district from the operation of any by-laws which they may make.

Finally the model by-laws contain a clause making an offence against the by-laws liable to a fine not exceeding £5, with a further daily penalty, after written notice, of forty shillings. This is an advantage as compared with legal procedure under the nuisance section of the Public Health Act, 1875, where it is necessary in the first instance to serve an order for the abatement of the nuisance within a certain time.

In the County of Middlesex, from the information available, I find that the following 19 authorities have made by-laws as to houses-let-in-lodgings :—

Acton.	Enfield.
Chiswick.	Finchley.
Edmonton.	Hanwell.

Hendon.	Twickenham.
Heston and Isleworth.	Uxbridge (urban).
Hornsey.	Wealdstone.
Southall-Norwood.	Wembley.
Southgate.	Willesden.
Staines (urban).	Hendon (rural).
Tottenham.	

As regards the remaining 14 authorities, there is not sufficient information to say whether or not by-laws have been adopted. It would be well if information as to this subject as well as to the number of houses registered under the by-laws was given by all district medical officers in their next yearly reports.

The total number of cases of over-crowding reported is 169, and all these were abated, apparently upon notice, under the Public Health Act. In only one case is it reported that it was necessary to take legal proceedings to enforce the notice, viz., in Uxbridge (urban). During recent years the construction of new railways in the north-west part of the County, and of reservoirs in the neighbourhood of Staines, has led to overcrowding, owing to the importation of navvies for the works. In Uxbridge (urban) and Harrow this cause still had effect during 1904, but in the case of Wembley, and of the rural and urban districts of Staines, the departure of these men upon the completion of the work has resulted in a decrease of overcrowding.

The remarks in the different reports are as follows:—

Acton.—Dr. Garry Simpson writes:—

“No doubt there is a good deal of over-crowding all over the district, but it is very difficult to detect cases, as we have no power

“ of entry at night, and upon making enquiries
“ in the daytime, the particulars given by the
“ occupiers are often very unreliable. The
“ only solution of this is the putting into
“ force of the by-laws relating to houses-let-
“ in-lodgings.”

Brentford.—Dr. Bott draws attention to the increased difficulty in detecting overcrowding in flats.

Chiswick.—The chief sanitary inspector reports that in house-to-house inspection full details as to size of rooms and number of occupants are recorded in a register, and is thus an easy matter to detect cases of overcrowding. All the cases which were found during the year were due to disproportionate assortment of persons to rooms, and were readily abated by rearrangement.

A revised code of by-laws has been submitted to the Local Government Board.

Edmonton.—Attention is drawn to the fact that many cases of overcrowding are not really due to want of space but to bad arrangement of the rooms for sleeping purposes. In cases of this sort the services of a female sanitary inspector are, I think, of considerable use, as a woman can, much better than a man, and with much less risk of being regarded as officiously meddling with domestic arrangements, direct the occupants how to overcome the overcrowding of their sleeping-rooms.

Dr. MacFadden's remarks are as follows :—

“ In a few instances the overcrowding
“ seemed to be the result of choice rather than
“ of necessity, though even where a family
“ had, say, three rooms at their disposal and
“ occupied only two of them, economic
“ reasons for their doing so were mostly put
“ forward. In most instances of this kind of
“ overcrowding, where its real disadvantages
“ and dangers to child life were explained to
“ the people, they readily put their empty
“ room into use again and so improved
“ matters.”

A revised code of by-laws is in force.

Feltham.—It is reported by Dr. Morris that overcrowding—

“ has been noticed occasionally where two
“ families occupy one house,” and he adds,
“ the matter is a serious one to remedy owing
“ to the gradual increase of cottage rents, and
“ difficulty which is caused in obtaining a house
“ at a moderate rental suitable and in keeping
“ with the requirements of the working man.”

Hamwell.—Dr. Hope writes as to the difficulty of detecting and proving overcrowding in certain parts of the district where lodgers are taken who are only on the premises during the hours of sleep. In such cases inspection during the day-time fails to reveal overcrowding.

Southall-Norwood.—There are 11 houses on the register of houses-let-in-lodgings. Dr. Windle reports the result of an action taken with a view to testing whether a certain class of tenement came within the scope of the by-laws. It is best given in his own words:—

“ Proceedings before the Justices were taken
“ during the year with respect to a group of
“ cottages in Hammond Road, as a test case
“ for the registration of these and similar
“ houses. Each cottage was occupied by two
“ families: having a common front entrance,
“ the family living upstairs having access to the
“ garden at the back by means of a staircase.
“ The Council were of opinion that the premises
“ constituted a house let in lodgings or
“ tenements: the owner held that each family
“ occupied a separate dwelling.

“ The decision of the Justices was in favour
“ of the owner.”

Sunbury.—Dr. Morris writes:—

“ Overcrowding has not been so noticeable
“ a feature as in previous years, partly owing
“ to the large works of reservoir construction
“ getting on to completion.”

Teddington.—New by-laws are proposed as regards houses-let-in-lodgings.

Tottenham.—Dr. Butler-Hogan states that nine-tenths of the overcrowding found in the district occurred in tenement houses, and these appear to be

largely occupied by alien immigrants. Frequent night visits have been paid both by the medical officer of health and the sanitary inspectors to detect overcrowding.

During the year 20 houses were registered under the by-laws as houses-let-in-lodgings.

Wealdstone.—Dr. G. Butler states that overcrowding exists to a greater or less degree, but that, owing to the high rents which prevail, it is a difficult matter to deal with.

Willesden.—As the result of details obtained in systematic house-to-house inspection Dr. William Butler appends a special report on tenement dwellings in the district. The total number of tenements to which the particulars relate is 5,164. inhabited by 23,279 persons, and, as the result of this inquiry, he arrives at the following conclusions:—

“(1) That the trend of growth of the
“ population in Willesden is to an augmentation
“ of the class living in tenements of less than
“ five rooms.

“(2) That the greatest increase in the
“ tenement class during the last decennium of
“ which we have statistical evidence has
“ occurred in tenements of four rooms.

“(3) That the increase next in proportion
“ has occurred in three-roomed tenements and
“ that this constitutes the largest class of
“ tenements of less than five rooms.

“(4) That the population housed in two-roomed tenements is actually increasing, though, proportionately to the whole population, it is diminishing.

“(5) That the population housed in one-room tenements is now actually and proportionately diminishing and has sunk to 2·6 per cent. of the whole population.

“(6) That the proportion of overcrowding in each class of tenement is undergoing marked and substantial reduction.”

Hendon (rural).—Dr. Campbell Gowan writes as follows:—

“Several cases of overcrowding have been dealt with by the sanitary inspector, but none of them were of a very bad type. Considering the scarcity of accommodation, it is surprising that there are not more cases to be dealt with.”

Staines (rural).—Dr. Morris states that since the completion of the reservoirs overcrowding has decreased, but cases are still met. He adds that there are “many houses let out in lodgings,” but no information is given as to whether any action has been taken with a view to the registration of these premises under by-laws.

COMMON LODGING-HOUSES.

The total number of common lodging-houses in the County registered under the by-laws, according to the

returns given in the annual reports, is 46. These are situated in the following districts :—

			umber.		Inspec- tions.	Contraven- tions.
Acton	..	..	2		regularly	1
Brentford	..	..	7	..	87	—
Edmonton	..	..	1	..	157	—
Heston and Isleworth			2	..	96	—
Staines (urban)	..		1	..	2	—
Tottenham		..	4	..	158	—
Uxbridge (urban)			14	..	—	—
Wembley	..	..	13		every 3 weeks	12
Hendon (rural)	..		2	..	6	2

In the case of Teddington, Southall-Norwood, Wealdstone and Staines (rural) there are no common lodging-houses in the district.

From the report of Mr. Holden, the sanitary inspector of Brentford, it appears that five of the common lodging-houses were remeasured, and new certificates were granted. One house, which was in a very bad state of repair, was visited by the Sanitary Committee, and as a result a notice was served to remedy the defects. This was not complied with, and the house was closed and struck off the register. The total number of beds in the seven lodging-houses is 178.

MOVABLE DWELLINGS, CARAVANS, ETC.

The subject of persons who occupied premises of this class is dealt with in several of the reports, and in some of the districts a considerable amount of the time of the sanitary staff is taken up in dealing with them.

From the tables attached to the reports it appears that during the year, 1,284 needed observation or inspection, and in 54 instances nuisances found were abated as the result, whilst it is reported that a large number of caravans were removed from the various districts by the sanitary authority.

In the case of Edmonton the chief sanitary inspector states that 592 gipsies were removed and that two were summoned and convicted. Summonses against others were also obtained, but before they could be served the persons had disappeared.

In Tottenham 41 encampments were removed by the sanitary staff, and it is stated :—

“ These van-dwellers are a continuous source of
“ danger, trouble, and expense to the district, and the
“ powers of dealing with them under the nuisance
“ clauses of the Public Health Act are by no means
“ sufficient or satisfactory.”

On two occasions Macedonian gipsies had to be removed at night time.

Foreign gipsies also had to be removed by the sanitary authority of Hampton.

In Harrow five caravans came under observation, and 12 nuisances were abated.

The medical officer of Wembley reports that, owing to action by the sanitary authority and the issue of summons against the owners, much improvement has been effected as regards the nuisance created by van-dwellers.

In Willesden legal proceedings were taken in 10 cases as regards the insanitary condition of caravans, and penalties were imposed and orders made to abate the nuisances.

Dr. Campbell Gowan reports, in connection with Hendon (rural)—

“About 75 vans were inspected during the year,
“mostly in the Pinner district, many of them in
“connection with the old-established Pinner Fair and
“Stanmore Fête. Fifteen vans were sent out of the
“district, on the ground that their presence created
“a nuisance of an insanitary nature.”

Dr. Morris, in the Staines (rural) report, states that a large number of vans came into the district, more especially during the fruit-picking season. These were located on land by the employers, and do not appear to have given rise to trouble. It is recommended that by-laws should be made under the Fruit Pickers' Lodgings Act, 1882.

In Uxbridge (rural) caravans had to be removed from Hillingdon and Northolt.

CANAL BOATS USED AS DWELLINGS.

Reference as to inspection of canal boats used as dwellings, is made in seven reports.

In the case of Brentford, which is a registration and inspecting authority under the Canal Boats Acts, it is reported by the inspector that 4 applications were made during the year for the registration of boats as dwellings. Certificates were granted in each case. The total number of boats on the register is now 304. In all, 104 boats were

inspected and 8 contraventions were found, but no legal proceedings were needed. One case of infectious disease (scarlet fever) occurred on a boat: the child was removed to the isolation hospital, and the boat was disinfected.

The River Lea Navigation passes through the district of Edmonton, and it is stated that 72 boats were inspected and 10 contraventions were detected.

In Hanwell, through which the Grand Junction Canal passes, 51 visits were made to 36 boats, and 8 infringements of the Acts and Regulations were found, but, generally speaking, the boats were in a satisfactory condition. One owner was prosecuted and fined.

The Canal Boat Officer for the district of **H**eston and Isleworth reports the inspection of 306 boats and the detection of 61 contraventions, of which 41 had been remedied and 20 were still outstanding at the end of the year.

From Southall-Norwood 100 visits to canal boats and 6 infringements of this regulation are reported, and in the Hampton and Staines (urban) reports visits are also referred to.

WATER SUPPLY.

It may be said that a public water supply is available throughout the County, except in the case of houses in some of the more outlying rural portions, the residents of which still depend upon the water obtained from local wells. As regards these I find, from the returns made by medical officers of health, that during 1904 a total of 31 wells were closed as polluted, whilst 33 wells were cleansed or repaired. Thirty-four new wells were sunk.

One of these was in the rural district of Hendon; the remainder were: 5 in Staines (urban), 1 in Sunbury, and 27 in Staines (rural). These, no doubt, are all deep wells in connection with public water supplies.

From the returns attached to the reports it appears that in thirteen districts the majority of the houses—70 per cent. in one district, and from 90–100 per cent. in the other districts—are supplied on the constant system. During the year, also, in a considerable number of houses draw-taps on the main were provided, in place of or in addition to taps drawing water from a storage cistern.

In the report for the County for 1893 a detailed account was given of the different companies supplying water in the various districts. The information set out would no doubt, apply now, except that extensions in the public supplies have taken place. Since that date the metropolitan water companies, which supplied a large area of the County, have been taken over by the Metropolitan Water Board.

The more noteworthy references to the subject of water-supply in the district reports are the following :—

Feltham.—It is stated that the district is supplied by the South-west Suburban Water Company, which obtains its water partly from the River Thames just above the town of Staines, and also from an artesian well. It is stated that out of 1,040 houses in the district about 682 are supplied by the Company; the remaining houses are supplied from wells “more or less shallow.” Owing to the fact that the sewage of the district is by means of cesspools, many of which are not watertight, the medical officer draws attention to the risk of pollution to which these wells are exposed.

Finchley.—Dr. Taylor states that the district is supplied by the Barnet Water Company, the water being obtained from wells sunk in the chalk at Barnet, Potters Bar, and East Barnet; in addition some water is obtained from the New River Company. He adds:—

“The service is at present intermittent to
“the greater portion of Finchley, but the
“Company are under an obligation to give a
“constant supply to the whole of the District
“within three years.

“The quantity of water supplied has been
“estimated at about 20 gallons per head per
“day. No water-softening process is in use.”

Friern Barnet.—The Barnet Water Company also supply this district, and it is stated that the question of a constant service is under the consideration of the District Council.

Staines (rural).—It is reported that:—

“A large number of houses still get their
“supplies from wells more or less shallow,”
and that owing to the occurrence of cases of enteric fever at Poyle, a number of wells were examined and cleansed. Endeavour has been made to obtain for this part of the district a supply of water from some of the water companies which supply other parts of the rural district.

Uxbridge (rural).—In the report for last year attention was directed to the need of providing many

cottages in the district with a proper water supply. Dr. Charpentier now writes:—

“Owing to the exertions of your Council
“water supply has been laid on to cottages at
“Harefield and Yiewsley, in each of which
“places it was badly needed. The supply of
“the Rickmansworth Company is, however,
“very deficient.”

SEWERAGE AND SEWAGE DISPOSAL.

The subject of sewerage and the methods adopted for dealing with sewage have been very fully described in the majority of the reports for 1904, and an abstract of the accounts given is set out below. Before proceeding to this a general statement on the matter will be useful.

All the urban districts in the County, with the exception of Feltham and Greenford, are now provided with systems of main sewerage, and as a result the number of cesspools in existence in these districts has been reduced to a relatively small number. In the case of Feltham the need of a system of sewerage appears to be a pressing one, as will be seen by the remarks of the medical officer of health, which I have fully quoted below. It is to be hoped that the newly-constituted Urban District Council will deal with the matter. At the present time attempt is made, by prescribing under by-laws that all new cesspools shall be water-tight, to prevent contamination of the subsoil water and the gravel soil around the cesspools; but the complete prevention of such pollution by these means must be a matter of considerable difficulty. Apart from this, however, sewage matter finds its way into the pond situated

on the Green, just south of the main street, by means of a surface-water drain, and with a view to minimizing nuisance the contents of this sewer are passed through a filtering chamber before discharging to the pond.

As regards the rural districts, all the parishes in Hendon, the two villages of South Mimms and Potters Bar in the rural district of South Mimms, and the parishes in Uxbridge (rural) have provided systems of sewerage, and the majority of the houses, except outlying premises, are connected with them. In the case of the parish of Hayes, in the Uxbridge rural district (now a separate urban district), much difficulty has arisen in the execution of the work, and the system is not yet completed. The villages of Ickenham and Northolt in Uxbridge rural district are without sewerage systems.

In the rural district of Staines no sewerage system has been constructed except a small scheme in the village of Harmondsworth.

As regards the sewerage systems, from the information available it appears that in the following districts a separate system of sewers for sewage and for surface water has been constructed:—

Acton.	Hampton Wick.
Brentford.	Southgate.
Edmonton.	Teddington.
Finchley.	Tottenham.
Friern Barnet.	Wood Green.

The various methods which have been adopted for dealing with the sewage at the outfall works are set out in the following account. They consist of chemical precipitation with or without land treatment, land treatment alone, and

treatment by filtration in specially-constructed filters, which are worked in some cases as contact filters, in others as continuous filters.

Acton.—The following is an abstract of the account given by the medical officer of health:—The sewerage in the greater part of the district is constructed on the separate system, there being one set of sewers for surface water and one for sewage. Part of the district, however, containing about 18,000 inhabitants, drains into the London sewerage system, and a great number of the older sewers in this part convey both surface water and sewage matter. Where new sewers are laid in this part of the district the storm water only is carried to the London system, the sewage passing to the Acton Sewage Works. In the other part of the district the sewage flows by gravitation, or is pumped to the sewage works constructed by the District Council and situated in Acton Vale. Here it passes first into open septic tanks, and then into continuous filter beds made up with large broken clinker. The effluent is discharged to the river. Owing to complaints of nuisance from sulphuretted hydrogen, the effluent from the septic tanks is now treated with permanganate of potash.

A Bill is being promoted by the District Council with a view to all sewage proper being carried into the London system of sewers.

During the year the new sewers laid were as follows—

Soil sewers	.. ..	3,398 yards.
Surface-water sewers	3,370	„

Brentford.—Dr. Bott gives an interesting description of the sewerage system, which briefly is as follows :—

The system is a separate one. The surface water is discharged to the Thames, and the sewage flows by a main sewer along the foreshore of the river to a pumping station at Town Meadow where it is pumped to the outfall works. The pumps here are partly worked by steam raised by the dust destructor. On an average 533,220 gallons of sewage are pumped daily. At the sewage works the sewage, which has already passed through a screening grid at the pumping station, is treated first with a solution of slaked lime and then of alum, and then flows to settling-tanks. The liquid from these is passed into another tank, and is again chemically treated by flowing over blocks of alum. From this tank it flows into bacterial filters, and is allowed to stand for a short period. The effluent from the filters is discharged into the River Thames.

The bacterial filters are about 9 feet deep, and the filtering material consists of rough coke, 5 feet 6 inches thick, with a layer of finer coke, 2 feet 6 inches, on top.

The sludge from the settling-tanks is removed to a well, and finally pressed into sewage cake.

Ealing.—Dr. Patten gives the following account in regard to the sewage works and sewerage of the district during the year :—

“ With reference to the Northern Sewage
“ Works at Perivale, I am able to state that

“ the flooding of the bacteria beds and the farm
“ was not experienced in any appreciable degree,
“ but this satisfactory result does not appear to
“ be due to any preventive steps taken by the
“ reservoir authorities, but simply to the
“ diminished rainfall throughout the year.
“ The sample of effluent taken by the County
“ authority and by the Thames Conservancy
“ have in each case proved very satisfactory.
“ Owing to the very large increase of the
“ borough population, the ‘sludge question’
“ became a difficulty, and improved means for
“ its disposal and treatment had to be seriously
“ entertained. After careful consideration it
“ was decided to deal with this sludge by
“ means of ‘presses.’ Plans were prepared
“ and submitted to the Local Government
“ Board, and the necessary inquiry was held by
“ that body. It is hoped that the official sanction
“ for the commencement of this important work
“ will very soon be received. Improvements
“ in connection with the older and much-taxed
“ Southern Works have been kept in view, and
“ material progress has been made with the
“ extension of the bacteria beds there situated.
“ Two of these beds are being prepared for
“ continuous filtration by a revolving automatic
“ sprinkler, and it is believed the first of these
“ beds will be in actual operation at the end of
“ February. During the year surface-water
“ relief sewers have been laid down—one from
“ Ealing Green, taking the route of the Grove,
“ Oxford Road, the Broadway, Haven Green,

“and Mount Park Road; and the other, in the
“west, from the valley water-course to the
“Uxbridge Road, nearly opposite the ‘Green
“Man’ Hotel. There has been practical
“evidence of their beneficial effect in relieving
“the existing sewage sewers (by taking the
“surface water) and in getting rid of the water
“quickly. A large tract of Ealing, hitherto
“only partially drained, is being dealt with by
“what is termed the southern boundary scheme,
“started in September last.”

Edmonton.—The sewerage of the district is constructed on the separate system; surface water being discharged to the local brooks, whilst the sewage is conveyed to a sewage farm, where it is dealt with by broad irrigation. The sewage of Southgate is also dealt with here.

The area of the farm is 235 acres, and recently a considerable area which was not previously available for sewage treatment has been brought into use. By this it is hoped longer periods of rest will be possible for the different irrigation areas and that a better effluent will result. The effluent discharges to Salmon’s Brook, and reaches the River Lea below Tottenham Lock.

The rapid growth of Edmonton and Southgate which is taking place has brought the question of sewage treatment prominently to the fore. Dr. MacFadden, in dealing with this, writes as follows:—

“In consequence of the growth of our popu-
“lation and that of Southgate, the contributing

“ district, which now sends more than the amount
 “ of sewage authorized under the award of 1883,
 “ it is recognized by the Council that some
 “ supplementary scheme will have to be intro-
 “ duced to provide in future for the increasing
 “ amount of sewage to be dealt with.

“ In 1903 the Engineer reported to a Joint
 “ Committee representing the Districts of
 “ Cheshunt, Edmonton, Enfield, and Southgate
 “ on a scheme embracing all these districts, but
 “ the negotiations finally fell through. A
 “ Special Committee, the Sewage Disposal Com-
 “ mittee, has now been appointed to negotiate
 “ with Southgate and to further inquire into
 “ the general question of sewage disposal. The
 “ Engineer, under their instructions, is at present
 “ considering the best means for increasing the
 “ capacity of the existing works.

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“ Failing the realization of a main drainage
 “ scheme of a sufficiently comprehensive
 “ character to relieve the whole of the districts
 “ now draining into the Lea Valley, it becomes
 “ eminently desirable that a purification system
 “ should be adopted that is at once efficient,
 “ free from danger to the health and comfort
 “ of the inhabitants, and capable of considerable
 “ expansion in the future.”

Enfield.—An account by the Surveyor of the District of the sewage works and proposed alterations is given. The following is a brief abstract:—The works are situated at Ponder’s End, and in view of

the increase of the district, and for other reasons, the Local Government Board have sanctioned the expenditure of £7,500 for improvements. This will be obtained from money which will be received by the District Council from the Metropolitan Water Board.

The sewerage system consists of two parts, known as the High and the Low level, corresponding to different parts of the district.

At the present time the sewage from the High Level passes from a receiving chamber “through
“the tanks formed in the ground, in which
“septic action takes place, and then distributed
“on to the land, or on to the land direct.”

The daily dry-weather flow is about 500,000 gallons, and the effluent passes into the East London intercepting ditch, but a portion of the sewage passes on to the filter-beds on the northern part of the farm.

The sewage from the Low level is at present received first into subsidence chambers, and thence
“passes into the two open concrete precipi-
“tation tanks (in which the sewage is
“liquified), then into the storage tanks, and
“from thence to a sump well, and is pumped
“into the carriers to be distributed on to the
“land, the effluent discharging into a water-
“course running parallel with the River Lea
“Navigation, through the Edmonton Sewage
“Farm, before joining a stream which
“discharges into the River Lea Navigation.”

The proposed new works consist in the erection of new machinery and a pumping station, the provision of three circular filters, each 100 feet in diameter, with filtering medium not less than seven feet deep and self-acting revolving sprinklers. The effluent from these will then be discharged on to land, whence it will pass eventually into the River Lea below the intake of the East London Water Company, now under the Metropolitan Water Board.

Feltham.—Dr. Morris reports as to the need which there is for a sewerage scheme. At present houses are provided with cesspools which, under the by-laws in force, are required to be watertight, with a view to prevent contamination of the subsoil and subsoil water, a matter of the greater importance from the fact that many houses still obtain their water supply from shallow wells. The cesspools attached to the older houses, however, are said to be not watertight, and the liquid contents soak away into the subsoil. Further, as regards the drainage of houses in the High Street, Dr. Morris writes as follows:—

“The storm-water drain running down the
“High Street is intercepted on the Green by a
“filtering chamber, which is supposed to
“screen a lot of sewage that comes down
“from the High Street before discharging
“into the pond.”

It appears, therefore, that sewage matter from these houses passes into this surface-water sewer and gains access to the pond.

It is also stated that in the case of some houses attempt is made to dispose of the excrement by means of the dry-earth system.

A Committee of the County Council have at present under consideration the report of the district medical officer, as obviously the question of providing a sewerage system is a pressing one in Feltham.

Finchley.--The sewers are constructed on the separate system. Dr. Taylor gives an account of the treatment adopted at the sewage works, which briefly consists of the following:—The addition of lime and sulphate of iron and passage of the whole into precipitation tanks. The liquid from these is dealt with in a double set of bacterial contact beds, of which there are sixteen, covering an area of 27,000 square feet. Nine of these consist of clinker and burnt clay, $2\frac{1}{2} \times 3\frac{1}{2}$ feet deep; the other seven are merely under-drained clay beds which are periodically ploughed over. The effluent remains in each filter about five hours, and is then run over meadow land before passing into the brook.

The question of the adequacy of the existing arrangements is referred to as follows by Dr. Taylor:—

“ There is no doubt in my mind that very
“ considerable expenditure must shortly be
“ incurred in order to continue dealing
“ adequately with the sewage under the present
“ system. Additional pumping plant is

“ required, and many of the filter-beds need to
“ be properly made up. The storm water is
“ also a constant source of anxiety, especially
“ when the land is taxed by a long period of
“ wet weather.

“ The problem to be faced is whether it will
“ be more economical to expend money on the
“ present system or to adopt a new scheme.
“ Since our present scheme was devised great
“ advances have been made in methods of
“ sewage disposal, and I believe it will be
“ found most advantageous to make use of
“ detritus and septic tanks in place of chemical
“ precipitation, to construct new primary and
“ secondary bacterial beds on the land lying
“ below the level of the low-level sewer,
“ and in addition to construct special storm-
“ water filters. If this were done it is probable
“ that the whole of the present sewage could
“ be treated by gravitation without the need
“ for pumping, a much smaller area of land
“ would be required, and the offensive odour
“ and other difficulties encountered in disposing
“ of the sludge would be minimized.”

Friern Barnet. — From the account given by Dr. Spreat it appears that the sewerage of the district for the most part is on the separate system. The sewage works are situated to the south of the district in Wood Green Parish, and sewage reaches them by gravitation. Here it is first chemically treated with a solution of lime, and

then with aluminio-ferric, and then passes into settling tanks. The effluent from the tanks is treated in two sets of contact bacterial beds.

Hampton.—It is reported that the existing tank capacity has been increased at the sewage works.

Hampton Wick.—All surface-water drains have now been disconnected from the local sewers, and have been connected with the new surface-water sewers.

Hanwell.—Dr. Hope writes to the following effect :—

“ The sewage farm is situated in the south of
“ the district, and the sewage is conveyed to it
“ by three main sewers at different levels, viz.,
“ the high, low, and mid level, and these drain
“ the whole district, excepting a very few
“ instances, where, on account of the houses
“ lying below the level of the low-level sewer,
“ pumping and special treatment has to be
“ resorted to. On arriving at the sewage farm
“ the sludge is deposited in settling tanks and
“ chemically treated. The effluent is run over
“ the land, and after being thus purified empties
“ into a tumbling bay in connection with the
“ Grand Junction Canal, into which it eventually
“ finds its way.”

Harrow.—The sanction of the Local Government Board has been obtained for a loan to purchase additional land at Newton Farm, and the bacteria beds at Greenhill Farm have been enlarged.

Hendon.—Dr. Andrew gives an account of the course of the main sewers, and, with one exception, the sewage from all parts flows by gravitation to the works in Reuter's Lane. The daily dry-weather flow is one million gallons, but in wet weather ten times this amount.

The works comprise 59 acres, and the method of treatment consists in—

- (a) Precipitation in tanks by means of the addition of sulphate of soda and alumina ;
- (b) Passage of the effluent from (a) to high-level filters made of burnt ballast four feet deep. There are six of these, covering an area of 6,000 superficial yards ;
- (c) Passage of effluent from (b) to low-level filters. These are six feet in depth, and are made up of broken bricks, burnt ballast, coke breeze, and pea gravel from below upwards.

In addition “there are 18 acres of land which can
“be used for irrigation purposes.”

The sludge from the precipitation tanks is pumped on to the land.

Dr. Andrew adds :—

“In the near future considerable alterations
“will have to be carried out to adequately
“treat the increased yearly flow to the
“works.”

Heston and Isleworth.—Dr. Steegmann makes the following remarks in connection with defects in house drains and new houses :—

“ In last year’s Report attention was drawn
“ to the fact that on many occasions defects
“ were found in the drains of new houses
“ when they were tested on the occurrence
“ of infectious disease in them. By the direc-
“ tion of the Health Committee a system was
“ devised to ensure the more strict testing of
“ the drains of new houses before occupation.
“ It had hitherto been the practice for the
“ Surveyor’s Department to carry out this duty,
“ whilst the Health Department was responsible
“ for testing all drains to which suspicion
“ attached in inhabited houses. The methods
“ used by the two departments being different,
“ it followed that what would satisfy the one
“ would not always satisfy the other. It was
“ therefore arranged that before the Surveyor
“ granted his certificate of the fitness of any new
“ house for habitation the drains should be
“ tested by one of his Inspectors in conjunction
“ with one from the Health Department. This
“ method of co-operation came into force at the
“ beginning of November, and during the
“ remaining portion of the year 28 new houses
“ were tested by the two departments, acting
“ together. In 50 per cent. of these houses
“ defects were discovered and remedied. In
“ the majority of these cases the defects were
“ minor ones, consisting generally of some fault
“ in the ventilating shaft that would not stand

“the smoke test. In may fairly be assumed
“that this careful testing of new houses will
“in the near future greatly reduce the number
“of defects found.”

Kingsbury.—Dr. Andrew states :—

“The new drainage scheme has now been in
“operation since 1902, in which year the
“works were formally opened by Sir Ralph
“Littler, K.C. Since that period, every house
“on the line of sewers has been connected up,
“and thus a great boon has been conveyed to the
“inhabitants by the absence of foul smells from
“polluted ditches and overflowing cesspools,
“which in the past abounded everywhere.”

The scheme, which was carried by Mr. Grimley, the Surveyor to the District Council, originally included the provision of septic tanks and bacterial filters as well as land treatment, but the two former had to be omitted owing to expense. The sewage is now dealt with, after passing through a screening chamber, by irrigation on five acres of land. The underlying soil is a mixture of clay and gravel, and is under-drained.

“There is also a storm-water filter, three
“feet deep, with 200 superficial yards area,
“consisting of clinker breeze covered with
“shingle, and is closely under-drained and
“ventilated.

“The effluent discharges to the River
“Brent.”

Southall-Norwood.—Details of the sewage works are supplied by the Engineer of the District Council, and are included in the report of the Medical Officer of Health. The sewage from the district enters at a separate point to the sewage from Hanwell Asylum, and passes first into a receptacle in which all suspended matter over a certain size is removed by means of Smith's Patent Revolving Wire Screens. The sewage is then treated with lime and passes to precipitation tanks.

Four new tanks, with a capacity of 600,000 gallons, were constructed in 1903, and these can be used continuously or intermittently.

“The effluent from the precipitation tank
“will then pass through about three-quarters
“of an acre of first contact beds. The feature
“of the new works is the ample provision made
“for the effectual aeration of the whole
“system.”

The sludge which is deposited in the precipitation tanks is collected in a well and pressed into sludge cake.

Southgate.—The following is an abstract of details given by the local medical officer of health:—

The sewerage of the district is on the separate system. The surface water is discharged at various points into the watercourses in the district. The sewage proper is conveyed ultimately to the sewage works of the Edmonton District Council under the

provisions of the Edmonton Local Board Separation Act, 1881, by which Southgate became a separate district. Since the separation nearly all the sewers have been reconstructed.

The main sewers for the most part run from east to west and join the Edmonton system at three points. Flushing chambers are provided at the head of every branch sewer; altogether there are more than a hundred of these.

Account of the sewage outfall works is given in connection with Edmonton.

During the year 9,151 yards of new sewers (foul and surface sewers) were laid.

Very few cesspools now exist in the district.

Staines (urban).—Dr. Tothill writes :—

“Ninety-five per cent. of the houses drain
“into sewers. The sewage is treated by
“filtration through filter beds at West Bedfont,
“about two miles from the town.”

No further particulars as to the system are given.

Sunbury.—Dr. Morris in his report on the district for 1903 criticized the means of ventilation of the sewerage system, which, in his opinion, were inadequate, and also drew attention to the leakage of subsoil water into the system, and recommended that an outside opinion should be obtained. He now reports that this was done, and states that as a result of the report so obtained

“better and more extensive ventilation” has been provided. Further recommendations appear to have been made by the engineer engaged to report, but it is not clear what these are. Dr. Morris states that this part of the report is under the consideration of the District Council, and adds:—

“Personally I am not in a position to judge
“of the merits or otherwise of the various
“schemes put forward, but any will be welcome
“so that they will prevent the former nuisance
“of bringing sewage back on to the premises
“instead of taking it freely away, an improve-
“ment which must be the means of improving
“the health of the district. That considerable
“expense will have to be undertaken, to cure
“the evil there can be no question, but the
“sooner it is completely remedied the better
“it will be for everybody concerned.”

At the outfall works, the sewage is dealt with by broad irrigation. The area in use is 15 acres.

Teddington.—It is reported that 21 cesspools were done away with and the houses connected with the sewers. There still remain 81 houses which are not so connected.

Wealdstone.—Reference is made in Dr. Butler's report to the completion of a new septic tank and to the construction of an 80 foot circular filter at the sewage disposal works, and it is stated that a good effluent is now obtained.

Wembley.—The system adopted for treating the sewage is said to be “ open septic tanks in combination with bacteria beds and land aeration.”

Willesden.—In last year’s report reference was made at some length by Dr. Wm. Butler as to the treatment of the sewage from that part of the district which does not drain into the Metropolitan sewerage system. Attention was directed to the difficulty of treating sewage at the existing sewage works, owing to the fact that they are situated in a part of the district which is rapidly being built upon, and to the fact that an increased area will be needed to deal with the increase in the amount of sewage. In this year’s report it is stated that an additional 14 acres of land have been brought into use, the total area available for sewage treatment now being 75 acres. The treatment is the same as before, viz., chemical precipitation and sedimentation in tanks, filtration through filter beds, and then land treatment.

During the year the London County Council was approached with a view to all the sewage of the district being taken into the Metropolitan system, and it is stated that there is a reasonable prospect of this scheme being carried out.

Hendon (rural).—Dr. Campbell Gowan reports :—

“ The whole district is supplied with main
“ and branch sewers.

“ The mains from Edgware and Little Stan-
“ more discharge on to the Lower Sewage

“ Farm in Honeypot Lane. The main from
“ Great Stanmore discharges on to the Upper
“ Sewage Farm in Honeypot Lane.

“ The Harrow Weald sewers connect with
“ the Wealdstone system, under special agree-
“ ment with the Wealdstone Urban Council.

“ The Pinner main discharges on to the
“ Sewage Farm at Cannon’s Lane. This sewer
“ is now being relaid. The system of treatment
“ is by settling tanks, bacteria beds, and filtra-
“ tion of the effluent. The results continue to
“ prove satisfactory.”

Staines (rural).—Dr. Morris states in connection with sewerage and sewage disposal:—

“ Apart from the small scheme installed at
“ Harmondsworth Village no works of this
“ character have been carried out, but a scheme
“ is on foot to deal with the sewage of Sipson,
“ which has caused such a nuisance in Cains
“ Lane.”

The other parishes to which he refers are Ashford and Hanworth where the cesspools are emptied by means of tank vans and force pumps.

“ Ashford has recently adopted a scheme of
“ its own through its Parochial Committee, and
“ a special sanitary rate is charged to this
“ particular parish. Ground, of course, has to
“ be rented to shoot the contents of the vans,
“ and plenty of disinfectants used. All this is
“ carried out from the Surveyor’s department.”

Uxbridge (rural).—In this report it is stated:—

“ Ickenham and Northolt are now the only
“ parts of your district without a sewerage
“ system. A system has been partly com-
“ pleted at Hayes but met with great difficulties
“ owing to the subsoil being waterlogged, and
“ the work has now been stopped.”

DAIRIES, COWSHEDS, AND MILKSHOPS.

In the Annual Report for 1903 brief reference was made to the Dairies, Cowsheds, and Milkshops Orders, made by the Privy Council and the Local Government Board under the Contagious Diseases (Animals) Act, and to the Regulations which local authorities have power to make under the Orders. The importance of a pure milk supply is so great that it will be of advantage to deal with this subject at some length.

Firstly, it may be pointed out that the Dairies, Cowsheds, and Milkshops Orders relate to the whole country, and are compulsory in all districts, whilst it is permissive to each local authority to adopt regulations for its district.

A short account of the history of the Orders will probably be of assistance in rightly understanding the position.

Under section 34 of the Contagious Diseases (Animals) Act, 1878, power was given to the Privy Council to make an Order for the following purposes:—

- (1) For the registration with the Local Authority of all persons, carrying on the trade of cowkeepers, dairymen, or purveyors of milk.

- (2) For the inspection of cattle in dairies, and for prescribing and regulating the lighting ventilation, cleansing, drainage, and water supply of dairies and cowsheds in the occupation of persons following the trade of cowkeepers or dairymen.
- (3) For securing the cleanliness of milkstores, milkshops, and of milk vessels used for containing milk for sale by such persons.
- (4) For prescribing precautions to be taken for protecting milk against infection or contamination.
- (5) For authorizing a Local Authority to make regulations for the purposes aforesaid, or any of them, subject to such conditions, if any, as the Privy Council prescribe.

Under the above powers the Privy Council issued an Order in 1885 which revoked a previous one made in 1879. The Order of 1885 is still in force as modified by two subsequent Orders of 1886 and 1899. The amending Order of 1886 was made to impose penalties on persons guilty of offences under the Order, and to substitute the Local Government Board for the Privy Council, power for the latter purpose having been created by section 9 of the Contagious Diseases (Animals) Act of 1886. The amending Order of 1899 was issued after the Report of the Royal Commission on Tuberculosis of 1898 was published, the object of it being to extend the meaning of the word disease in article 15 of the Order of 1885, so as to include tuberculosis of the udder of the cow as one of the diseases to which article 15 applied.

Under the above Order 1885 as amended it is the *duty* of each sanitary authority to enforce the requirements set out therein in regard to the business of a cowkeeper, dairyman, or purveyor of milk.

Thus it provides that all authorities shall register and keep a register of such persons in their districts, and until he is registered it is not lawful for any person to carry on the business; that it is not lawful to occupy a new dairy or cowshed unless the sanitary authority is satisfied as to the construction, ventilation, lighting, drainage, and water supply; that all cowsheds, dairies, milk stores, and milk shops must satisfy certain sanitary requirements, which are set out in the Order; that precautions must be taken by cowkeepers, dairymen, and purveyors of milk against the risk of infection of milk, and that the milk of a diseased cow—which includes a cow suffering from tuberculosis of the udder—shall not be mixed with other milk, nor used or sold for human food, and shall not be used or sold for food of swine or other animals unless previously boiled.

With a view to greater precision and to satisfactory enforcement of the requirements of the Order, power is given to local authorities to make Regulations for the following purposes, viz. :—

- (a) For the inspection of cattle in dairies.
- (b) For prescribing and regulating the lighting, ventilation, drainage, and water supply of dairies and cowsheds in the occupation of persons following the trade of cowkeepers or dairymen.
- (c) For securing the cleanliness of milk stores, milk shops, and of milk vessels used for containing milk for sale.

- (d) For prescribing precautions to be taken by purveyors of milk and persons selling milk by retail against infection or contamination.

Model Regulations on the above matters have been drawn up by the Local Government Board since the issue of the Report of the Royal Commission on Tuberculosis in 1899, for the guidance of local authorities, and these either entirely or in part have been adopted by many of the authorities in the County, though some have not yet adopted any regulations, and others have regulations of date previous to 1899.

Before proceeding to refer to the reports by the district medical officers on the subject of the administration of the powers which exist for controlling the milk supply, it will be well to draw attention to an "Interim Report of the Royal Commission appointed to inquire into the relations of Human and Animal Tuberculosis," which was issued on May 16th, 1904.

This Commission, which consists of the following members, viz., Sir Michael Foster, K.C.B., Professor Sims Woodhead, Professor Sidney Martin, Professor John MacFadyean and Professor Rupert Boyce, with Dr. E. J. Steegmann as Secretary, was appointed in August, 1901, to inquire and report with respect to Tuberculosis.

1. Whether the disease in animals and man is one and the same ;
2. Whether animals and man can be reciprocally infected with it ;
3. Under what conditions, if at all, the transmission of the disease from animals to man takes place, and what are the circumstances favourable or unfavourable to such transmission.

In the report now issued the Commissioners state :—

“ The first line of inquiry upon which we entered may be
“ stated as follows :—

“ What are the effects produced by introducing into the
“ body of the bovine animal (calf, heifer, cow), either through
“ the alimentary canal as food, or directly into the tissues by
“ subcutaneous or other injection, tuberculous material of
“ human origin, *i.e.*, material containing living tubercle bacilli
“ obtained from various cases of tuberculous disease in human
“ beings, and how far do these effects resemble or differ from
“ the effects produced by introducing into the bovine animal,
“ under conditions as similar as possible, tuberculous material
“ of bovine origin, *i.e.*, material containing living tubercle
“ bacilli obtained from cases of tuberculous disease in the cow,
“ calf, or ox ?

“ We have up to the present made use, in the above
“ inquiry, of more than twenty different ‘ strains ’ of tubercu-
“ lous material of human origin, that is to say, of material
“ taken from more than twenty cases of tuberculous disease in
“ human beings, including sputum from phthisical patients
“ and the diseased part of the lungs in pulmonary tuberculosis,
“ mesenteric glands in primary abdominal tuberculosis,
“ tuberculous bronchial and cervical glands, and tuberculous
“ joints. We have compared the effects produced by these
“ with the effects produced by several different strains of
“ tuberculous material of bovine origin.

“ In the case of seven of the above strains of human origin,
“ the introduction of the human tuberculous material into
“ cattle gave rise at once to acute tuberculosis, with the
“ development of widespread disease in various organs of the
“ body, such as the lungs, spleen, liver, lymphatic glands, etc.
“ In some instances the disease was of remarkable severity.

“ In the case of the remaining strains, the bovine animals
“ into which the tuberculous material was first introduced was
“ affected to a less extent. The tuberculous disease was either

“ limited to the spot where the material was introduced (this
“ occurred, however, in two instances only, and these at the
“ very beginning of our inquiry), or spread to a variable extent
“ from the seat of inoculation along the lymphatic glands, with,
“ at most, the appearance of a very small amount of tubercle
“ in such organs as the lungs and spleen. Yet tuberculous
“ material taken from the bovine animal thus affected, and
“ introduced successively into other bovine animals, or into
“ guinea-pigs from which bovine animals were subsequently
“ inoculated, has, up to the present, in the case of five of these
“ remaining strains, ultimately given rise in the bovine animal
“ to general tuberculosis of an intense character; and we are
“ still carrying out observations in this direction.

“ We have very carefully compared the disease thus set up
“ in the bovine animal by material of human origin with that
“ set up in the bovine animal by material of bovine origin,
“ and so far we have found the one, both in its broad general
“ features and in its finer histological details, to be identical
“ with the other. We have so far failed to discover any
“ character by which we could distinguish the one from the
“ other; and our records contain accounts of the post-mortem
“ examinations of bovine animals infected with tuberculous
“ material of human origin, which might be used as typical
“ descriptions of ordinary bovine tuberculosis.

“ The results which we have thus obtained are so striking,
“ that we have felt it our duty to make them known, without
“ further delay, in the present Interim Report.

“ We defer to a further Report all narration of the details
“ of our experiments (and we may say that up to the present
“ time we have made use of more than two hundred bovine
“ animals), as well as all discussions, including those dealing
“ with the influence of dose and of individual as well as
“ racial susceptibility, with questions of the specific virulence
“ of the different strains of bacilli, with the relative activity of
“ cultures of bacilli and of emulsions of tuberculous organs
“ and tissues, and with other points. In that Report we shall

“ deal fully with all these matters, as well as with the
“ question why our results differ from those of some other
“ observers.

“ Meanwhile we have thought it our duty to make this
“ short Interim Report, for the reason that the result at which
“ we have arrived, namely, that tubercle of human origin can
“ give rise in the bovine animal to tuberculosis identical with
“ ordinary bovine tuberculosis, seems to us to show quite
“ clearly that it would be most unwise to frame or modify
“ legislative measures in accordance with the view that human
“ and bovine tubercle bacilli are specifically different from
“ each other, and that the disease caused by the one is a
“ wholly different thing from the disease caused by the other.”

The concluding paragraph in the above quotation indicates the importance which the results arrived at have in regard to administration. And I would here refer to the opinion expressed in the circular letter of the Local Government Board, dated 11th March, 1899, which was forwarded to local authorities, together with copies of the Dairies, Cowsheds, and Milkshops Order of 1899, and of model regulations, namely, that it would be competent for a District Council to expend money in employing or appointing a veterinary surgeon for the purpose of the Orders.

Information is not forthcoming from the reports as to the extent, if any, to which such veterinary inspection is made in any systematic manner, except as regards the District of Uxbridge (urban), in which district a veterinary surgeon has been engaged, for some years past, to report periodically on cows and cowsheds in the district.

The only other instance of the employment of a veterinary surgeon of which I am aware is in the case of Acton, and the circumstances under which he was engaged were briefly as follows:—I was asked by

Dr. Simpson, of Acton, if I would visit a cowshed with him where there was a cow which he regarded as suffering from tuberculosis. I went down at once, having arranged with Dr. Simpson to have a veterinary surgeon present, but in the meantime the cowkeeper disposed of the cow.

We can now turn to a consideration of the condition of dairies, cowsheds, and milkshops in the County, and of the work done in connection with them during 1904, in so far as information from the district reports is available.

In the first place, it will be useful to set out in tabular form the number of these premises in each district, and whether regulations have or have not been adopted. It would be an interesting matter to know the number of cows, with a view to seeing to what extent the trade is carried on in the County; also whether much milk is sent out of the County; but information on these points is incomplete, only a few medical officers giving particulars as to the number of cows.

	No of Cowsheds registered.	No. of Dairies and Milkshops registered.	Date of Regula- tions in force.		No. of Cowsheds registered.	No. of Dairies and Milkshops registered.	Date of Regula- tions in force.
<i>Urban.</i>							
Acton..	3	68	1890	Kingsbury ..	7	no information.	1899
Brentford			1890	Southall-Norwood	9	11	1889
Chiswick	2	38	1900	Southgate ..	13	15	since 1899
Ealing (<i>Borough</i>)	8	30	1903	Staines ..	5	10	no regulations
Edmonton	4	34	1899	Sunbury ..	10	3	1888
Enfield	32	54	1900	Teddington ..	20	20	1900
Feltham		64	1904	Tottenham ..	8	181	1897
Finchley	9	2	1900	Twickenham ..	no return.	36	1901
Friern Barnet	5	18	..	Uxbridge ..	3	9	1897
Greenford	7	13	no information.	Wealdstone ..	12	13	1904
		..	no regulations	Wembley ..	..	113	1889
		5	1896	Willesden ..	4	40	1891
Hampton	7	2	1904	Wood Green..			
Hampton Wick	1	18	1899	<i>Rural.</i>			
Hanwell	3	5	1900	Hendon ..	16	4	1899
Harrow	9	no information.	1899	South Mimms	no information.		1889
Hendon		43	1900	Staines ..	36	15	1888
Heston and Isleworth	18	66	1899	Uxbridge ..		77	1888
Hornsey (<i>Borough</i>) ..	4						

In the case of Acton, Willesden, and Wood Green special powers in regard to milk have been obtained under recent local Acts.

The following account, taken from the reports of the medical officers of health, will give an idea of the condition of these premises, the character of the regulations, and the extent to which the Orders and the Regulations are enforced:—

Acton.—In the report of the chief sanitary inspector it is stated that every quarter a notice is sent to each cowkeeper and dairyman reminding him of the periodic limewhiting required by the regulations, and he adds:—

“141 visits were paid to the dairies and
“milkshops, and 18 to the cowsheds, and they
“were found to be in good order, with the
“exception of one, which was found to be
“getting into a bad state. I served a notice
“upon the owner to remedy the defects, and
“he has given the tenant notice to leave, and
“proposes putting up some houses on the site.”

It is necessary to add that in the Acton Improvement Act, 1904, increased and important powers in regard to the milk supply of the district were obtained.

Inspections	159
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Brentford.—It is stated that periodical inspections have been made and no cause of complaint discovered, but on visiting one of the slaughter-houses it was found that an unregistered dairyman was allowed to clean his cans there. This was at once stopped.

Inspections	periodically.
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Chiswick.—The chief sanitary inspector reports that special attention is given by the sanitary staff to the cleansing of premises and utensils. He states that—

“A large quantity of the milk supplied in
 “the district is sent from dairy farms belonging
 “to or under the direct supervision of dairymen
 “supplying milk in the district, and I have
 “every reason to believe that every precaution
 “is taken in the management of the dairy
 “farms referred to.”

Inspections quarterly.

Ealing.—No special remarks.

Inspections quarterly.

Edmonton.—Inspection of cowsheds, dairies, and milkshops are made monthly and at irregular intervals between. The cowsheds are mostly fairly situated as regards open space. The requirements of the regulations as to cubic space appear to have brought about a reduction in the number of cowsheds. It is stated in the report of the sanitary inspector that—

“There is a tendency amongst milksellers
 “generally to realize the necessity of improving
 “the conditions under which milk is stored.
 “One cowkeeper has already adopted steam
 “apparatus for cleansing, scalding, and
 “steaming the utensils. Also one dairyman
 “and milkseller has done likewise.”

Inspections .. monthly or more
 frequently.

Enfield.—Dr. Ridge reports—

“ I made a special inspection of the dairies
“ and milk farms. There is in most cases an
“ effort made, by special apparatus on the
“ farms, to preserve the purity of the milk
“ supply, but the highest standard of cleanliness
“ was not reached in every case, and it is
“ impossible to guarantee that all precautions
“ are always used. In more than one case I
“ found the hands of the milkers dirty, though
“ they ‘had been washed,’ and the ideas of
“ cleanliness seemed to be primitive.”

Inspections frequently.

Feltham.—No remarks as regards the condition of any premises, but it is stated that the Model Regulations have been adopted.

Inspections —

Finchley.—The Sanitary Inspector in his report on dairies, cowsheds and milkshops, states that their periodical inspection has been carried out. Some old buildings at a farm in Whetstone, which it was found were in use as cowsheds, and which were badly lighted and ventilated, and inadequately provided with water, have since been put into a proper condition. Improvements have also been effected in other premises.

In the early part of 1904 an epidemic outbreak of sore throat occurred in the district of Finchley and adjoining districts, which was traced to a particular milk supply. In his special report on

this outbreak Dr. Kenwood, who was then medical officer of health, makes the following remarks:—

“There is a stern lesson which such outbreaks teach us:—An epidemic occurs; we find unhealthy cows; and from other very positive evidence we condemn the milk as the source of the infection; and after many people have been exposed to suffering, if not death, we are able to take measures that stamp out disease. This is not as things should be. We should take the necessary steps to *prevent the epidemic*. To my mind a thorough and systematic inspection of all cows in each district at regular and short intervals should be undertaken, and to that end a veterinary expert should be appointed by several sanitary authorities in combination. It is a monstrous thing that with these milk epidemics cropping up nothing whatever is done to prevent their recurrence, and that the whole of our action is based upon the lines of preventing the spread of the outbreak after it has already worked a vast amount of harm, when it is an easy matter to proceed upon these lines of true prevention that would aim at removing the possibility of future outbreak.”

In this connection it is necessary to draw attention to the opinion expressed in the memorandum of the Local Government Board which accompanied the Dairies, Cowsheds, and

Milkshops Order of 1899, that it is competent for sanitary authorities to appoint or employ veterinary inspectors with a view to the discovery of disease in cows.

Inspections 76

Friern Barnet.—No special remarks.

Inspections quarterly.

Greenford.—No remarks.

Inspections 10

Hampton.—Dr. Tyndale states the cowsheds and dairies have been visited from time to time by the inspector and himself, and that it has been necessary to call upon the occupiers to carry out cleansing and limewashing. He adds that there are no regulations in force and recommends the District Council to adopt them.

Inspections 27

Hampton Wick.—The one cowshed and the milk premises are satisfactory. The greater part of the milk supply for the district comes from adjoining districts.

Inspections frequently.

Hanwell.—Dr. Hope writes as follows:—

“Great attention has been paid to these,
 “more especially during the summer months.
 “It is strange how difficult it is in some
 “instances to get people to take simple pre-
 “cautions, such as keeping a cover over vessels

“containing milk, etc., etc. In many cases
 “when I enter these places I find the vessels
 “containing milk quite unprotected with
 “swarms of flies near at hand, if not actually
 “inside the vessel.

“Your Council made Regulations under this
 “heading dated 22nd November, 1904. I
 “would like very much to have had another
 “clause inserted between Clauses 17 and 18 as
 “follows:—That the name or names of the
 “person (or persons) who is (or are) registered
 “as a Cowkeeper, Dairymen, or Purveyor of
 “Milk under the Dairies, Cowsheds and Milk
 “Shops Order, 1885, together with the words
 “‘Registered for the Sale of Milk’ shall be
 “painted in letters of not less than $1\frac{1}{2}$ inches
 “in height over the outer door of the place
 “where Milk is sold.”

Inspections 42

Harrow.—In reference to the dairies, cowsheds, and milkshops in Harrow, Dr. Fletcher Little says:—

“Some of these places have reached such a
 “standard of sanitation that, with a few further
 “improvements, they would satisfy all require-
 “ments of the Dairies and Cowsheds Orders and
 “the Regulations thereunder. Others lag far
 “behind. The cowsheds in some cases are
 “not sufficiently lighted, nor kept clean. The
 “cattle are not groomed, and the hind quarters,
 “tails, udders, and teats are in many cases
 “caked with dung.

“All sanitarians are agreed that the pro-
“vision of clean milk is of the first importance
“in preventing infant sickness and mortality.
“The persons of the employees, particularly
“the hands, should be kept thoroughly clean,
“as well as the cattle, cowsheds, and utensils.”

The premises are inspected by Dr. Little each half-
year, and more frequently when necessary.

Inspections quarterly.

Hendon.—Dr. Andrew states that most of the cow-
sheds and dairies when inspected were found in
a satisfactory state, but a few were not so, owing
to accumulations of dung and filth generally in
the vicinity of the sheds. With an increase in
the sanitary staff which is proposed it is
anticipated that improvement will take place in
the conditions.

Inspections not stated.

Heston and Isleworth.—Dr. Steegmann reports as
follows :—

“The sanitary conditions of these places is
“a matter of greater moment to the public
“health than that of bakehouses, or any other
“places supplying food.

.

“Only seven actual contraventions of the
“by-laws were found, but it cannot be said
“from this that the general condition of these
“places was altogether satisfactory. It is

“ unfortunately often difficult to obtain in a
 “ practical way that which is theoretically
 “ desirable. A certain proportion of the milk
 “ used in any district may be supplied from
 “ places outside it, and the whole matter of the
 “ inspection and regulation of the milk trade is
 “ possibly one of those things that might with
 “ advantage be undertaken by one central
 “ authority for the County. The somewhat
 “ unsatisfactory condition in which some of the
 “ cowsheds and many of the cows are kept
 “ arises, in Mr. Smith’s opinion, from the want
 “ of more labour and stricter supervision on
 “ the part of the occupier and owner.”

As will be seen from the number of inspections in proportion to the number of cowsheds, dairy and milkshop premises, namely 61, very considerable amount of attention—in fact more than in any other district in the County—appears to be devoted to them in this district.

Inspections	1,088
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Hornsey.—It is reported that in 22 instances contraventions of the regulations were noticed during the regular inspection.

Inspections	171
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Kingsbury.—Dr. Andrew, the medical officer of health, writes :—

“ The cowsheds and dairies have been
 “ visited, and found fairly satisfactory. Two
 “ important farms have been connected up to

“ the new system of drainage, and I hope that
“ this will help to alleviate some of the
“ difficulties these farms have had to contend
“ with in the past. I sincerely hope dairy
“ farmers will see to the importance of cleanli-
“ ness in and around their cowsheds, as
“ collections of filth are of far too frequent
“ occurrence, and the law will have to be
“ rigidly enforced as to these conditions.”

Inspections .. Not stated.

Southall-Norwood.—Dr. Windle reports as follows :—

(a) As regards cowsheds :—

“ Structurally there has been great improve-
“ ment in the majority of these premises
“ during the past few years, and several in
“ the district are really very excellent in this
“ respect. It is more particularly with regard
“ to the regulations relating to general clean-
“ liness in the cattle, utensils, and persons
“ engaged in milking, that there is cause for
“ complaint in some instances. I fail to see
“ how the regulations can be enforced without
“ taking legal action, and I should be reluctant
“ to recommend such a course at present,
“ since the occupiers no doubt are guided to
“ a great extent by the conditions prevailing
“ in other districts. In the near future it is
“ highly probable that uniform regulations
“ throughout the country as to the sanitary
“ condition of cowsheds, cleanliness of the
“ cattle, of the milkers, and of all utensils used
“ in the process will be enforced.”

(b) As regards milkshops and dairies :—

“ All the milkshops in the district have been
 “ frequently inspected and visited for purposes
 “ of enquiry during the year. Generally
 “ speaking, the regulations are carried out
 “ in a very satisfactory manner, with one
 “ exception, in which all were ignored or
 “ contravened.”

Inspections .. frequently.

Southgate.—In reporting on these premises Dr. Sidney Ransome states that they have been systematically visited and found to be well kept.

Inspections 81

Staines (urban).—Dr. Tothill reports :—

“ There have been two contraventions of bye-
 “ laws, viz. : keeping cows with insufficient air
 “ space in shed, and allowing accumulation
 “ of refuse. These were remedied without
 “ prosecution.”

Inspections quarterly.

Teddington.—Premises regularly inspected, and various defects found were remedied.

“ An application to keep cows in Stanley
 “ Gardens Road was refused, the proposed
 “ premises being situated in a densely populated
 “ neighbourhood.”

Inspections frequently.

Tottenham.—During the year ten persons were newly registered under the Dairies, Cowsheds and Milkshops Order. Most of the milk supply of the district is derived from outside. The number of inspections made was 451. Dr. Butler-Hogan gives an account of municipal milk depôts which have been provided in various towns in this country for the supply of milk for infant feeding, and also describes the system in force in an American city, and suggests the desirability of a milk depôt on such lines being established in a district like Tottenham.

Inspections..	451
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Twickenham.—No remarks.

Inspections	frequently.
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Uxbridge (urban).—In this district a veterinary surgeon is employed to inspect and report on cowsheds, but unfortunately in this year's report the medical officer of health, beyond referring to this fact, gives no information on the subject.

Wealdstone.—Dr. Butler reports that the use of one cowshed has been discontinued owing to its insanitary condition. He draws attention to the need for scrupulous cleanliness of the cows, especially the udders, and of the milkers, and recommends that provision be made for this in all sheds by the proprietor. It appears that only a small part of the milk supply of the district is obtained from cows in the district, most of it

coming from outside farms, and Dr. Butler comments on the fact that no control can be exercised by sanitary authorities over these. He adds :—

“I think a register should be kept of all
“farmers sending milk into this district, and if
“possible a certificate as to their condition
“obtained at intervals from the Medical
“Officers of Health of the district in which
“they are situated.”

Inspections quarterly.

Wembley.—Dr. Goddard writes as follows :—

“Now that you have adopted the Model
“Regulations under the Order of 1899, there
“will be less difficulty in dealing with in-
“sanitary conditions in the cowsheds and
“dairies.

“I am desirous that at the next visit of
“the County Medical Officer these premises
“will be in the best condition possible.

“There is no good reason why the cows
“should be kept dirty; the milkers have filthy
“clothes and hands, and the premises are in-
“sanitary and unclean, and in future I shall
“report more frequently, with a view to your
“taking action when occasion requires.

“We are fully alive to the necessity of
“frequent inspections of milkshops and the
“premises of small milk vendors who are now
“all registered, and particulars of the condition
“of their premises carefully recorded.”

Inspections quarterly.

Willesden.—There are 6 cowsheds in this district. The number of milkshops on the register is 107, including several which were newly registered during 1904. Inspections were made twice during the year, as a matter of routine, but more frequently where considered necessary.

Inspections	264
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Wood Green.—The Sanitary Inspector reports that nine persons were registered under the Order during the year, five of which were new registrations, but two of the latter relinquished the sale of milk to avoid carrying out requisite alterations to the premises.

Total inspections	182
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Hendon (rural).—Dr. Campbell Gowan writes as regards the dairies, cowsheds, and milkshops :—

“ Eighteen contraventions of the by-laws
 “ were discovered, some of a serious nature.
 “ In one case, at Pinner, a prosecution became
 “ necessary, which resulted in the granting of
 “ an order, with costs, for the necessary alter-
 “ ations to be carried out at once.

“ Two cases in Harrow Weald Parish have
 “ given a good deal of trouble, and are still
 “ under observation. The remaining cowsheds,
 “ milkshops, and dairies are in a good condition.”

Inspections	104
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South Mimms.—No information is given as to the number or condition of cowsheds and dairies, but the local authority is recommended to adopt new regulations in place of those in force, and to employ the services of a veterinary surgeon as occasion arises.

Staines (rural).—Dr. Dwight Morris writes, as regards cowsheds, dairies and milkshop premises, that he visits them at all times of the year when in their vicinity and that the Sanitary Inspector visits them each half-year. Further inspections are made if there is any reason to suspect that illness is associated with the milk supply. No particulars are given as to the condition of the premises during 1904.

As regards the subject of the Regulations under the Dairies, Cowsheds, and Milkshops Order, which have been adopted by the various sanitary authorities in the County, the information may be summarized thus:—

The following districts have not adopted any regulations:—

Sunbury.

Hampton.

As regards three districts information is wanting as to whether regulations have been adopted:—

Hendon (urban).

Kingsbury.

Greenford.

The remaining 29 districts have adopted regulations.

Of these 29 districts, in 16 the model regulations issued by the Local Government Board under cover of the circular letter relating to the Order of 1899 have been adopted since then, whilst in the remaining 13 districts regulations of a previous date are still in force. As regards three of these districts, however—viz., Acton, Willesden, and Wood Green—it is necessary to state that increased powers relating to the control of the milk supply have been obtained under the provisions of recent local improvement Acts.

SLAUGHTER-HOUSES.

In the returns attached to the greater number of the reports a total of 187 slaughter-houses is given of premises registered for the slaughtering of animals. The number is not given in the case of Brentford, Hendon (urban), Kingsbury, Uxbridge (urban), and Staines (rural). In the report of Staines (rural) it is stated as regards slaughter-houses, "These are not registered, and are only inspected occasionally." In Greenford there are no slaughter-houses.

The District Council of Acton have obtained powers in the Acton Improvement Act, 1903, by which they can by agreement acquire, or abolish slaughtering in, slaughter-houses in the district and provide adequate slaughter-houses in the district.

In Edmonton there are six slaughter-houses, four of which are annually licensed under the Public Health Amendment Act, 1890. The other two are old registered premises. One slaughter-house was demolished during the year.

In the report relating to Finchley the sanitary inspector states that there are 11 licensed premises for the slaughtering

of animals for food, and that these were found in a satisfactory condition. Two applications for such slaughter-houses were received during the year—one which related to the erection anew of a slaughter-house was refused, as the proposed building would have been within 100 feet of a dwelling-house; the other, which related to existing premises, was granted.

In Friern Barnet the two slaughter-houses have been considerably improved during the year.

The premises in Hampton, in Hampton Wick, and in Hanwell are reported as being in satisfactory condition.

In Harrow there are seven slaughter-houses, and these it is stated are maintained in a satisfactory condition.

In the Heston and Isleworth report Dr. Steegmann states that 177 inspections were made of the 14 slaughter-houses. He draws attention to the impossibility of properly inspecting carcasses of all animals slaughtered, and he adds :—

“ The provision of a central public slaughter-house is
“ needed. It should be under the management of the
“ Council, and in it all animals such as pigs, cattle, and
“ sheep killed in the district and intended for food
“ should be slaughtered, and no part of any animal
“ should be removed from the slaughter-house before
“ examination by an inspector. The convenience of
“ the occupiers of the 14 present private slaughter-
“ houses and the vested interests of the owners are,
“ of course, important factors to be considered, but
“ the gain to the community seems to outweigh these
“ points.”

In the report of Staines (urban) Dr. Tothill states that there are 3 slaughter-houses and that they were maintained in a satisfactory condition.

In Teddington an annual licence was granted for the reopening of a slaughter-house.

In Tottenham there are 17 slaughter-houses. Dr. Butler-Hogan recommends the advisability of a public slaughter-house being provided by the sanitary authority, more especially with a view to the more adequate inspection and control of the meat supply.

Dr. Goddard reports that not all the slaughter-houses in Wembley are satisfactory and that, as regards one he has recommended, the refusal of a licence.

In Willesden there are 10 premises, and Dr. W. Butler states that during the year structural alterations had to be effected in 4 of them. He adds :—

“The general condition of the private slaughter-houses leaves much to be desired.”

In the case of Hendon (rural) it is reported that 94 inspections were made of the 9 slaughter-houses. Three contraventions of the by-laws were dealt with. The premises are said to be in a very good condition.

OFFENSIVE TRADES.

There appear to be but few of this class of premises in the County, as only 6 such are noted in the returns, namely, 1 in Greenford, 1 in Hampton, 2 in Heston and Isleworth, 1 in Staines (urban) and 1 in Wembley.

The inspections made of the premises and the contraventions of the by-laws are as follows:—

			Visits.	Contraventions.
Greenford	..	..	10	3
Hampton	..	..	2	—
Heston and Isleworth	..		112	—
Staines (urban)	..	..	6	—
Wembley	..	..	—	—

HOUSE REFUSE COLLECTION AND DISPOSAL.

The *collection* of house refuse is in the majority of the districts made once a week. In one district, Wealdstone, the collection is a weekly one during the months of July, August, and September, but during the rest of the year it is made once a fortnight.

In the case of Heston and Isleworth, and of Uxbridge (rural), it is stated that collection is made once a fortnight, whilst in the case of Teddington a daily collection has been initiated. Dr. Günther gives the following account:—

“The collection of house refuse has frequently
 “engaged the attention of the Council during the
 “current year. In one part of the district the system
 “of daily collection of house refuse was experimentally
 “tried for a period of about four months, and at the
 “expiration of that time it was carried out throughout
 “the district. With this new system it is necessary
 “for the householder to place the house refuse in a
 “special receptacle outside the front door every
 “morning. Carts belonging to the Council empty these
 “receptacles as they pass along the street. It is most
 “desirable that the men who perform this work of

“collecting the refuse do it as early as possible, for if
“done in this way many objections to the method of
“collection are avoided. The system has another great
“advantage, namely, that the condition of the refuse
“is such that it can be carted through the streets
“without fear of creating a nuisance, as the refuse is
“much fresher than it would be were the collection
“only made once a fortnight as formerly. The refuse
“was often saturated with water, and was sometimes
“so offensive that the workmen refused to deal with it.
“I am sorry to say that some householders objected
“to the system of daily collection on account of the
“unsightliness of the receptacles standing on the foot-
“paths and also on account of the inconvenience of
“the work which has to be performed by their
“domestics and which necessitates carrying the refuse
“to the front of the premises, but on the whole the
“system was favourably received by the inhabitants.”

In Friern Barnet collection of house refuse is made once a fortnight, and the medical officer points out the desirability of a weekly collection.

As regards the *disposal* of the refuse when collected it is still largely the practice to deposit it in “shoots,” which in many instances consist of disused gravel pits. This method of disposal is rightly criticised by the medical officers of health as undesirable, and recommendation is made that the question of providing dust destructors for the districts should be considered. There can be no doubt, in view of the rapid extension in the erection of houses which is taking place in Middlesex, that this matter should be dealt with by the various authorities.

In a few districts dust destructors have now been erected or are in course of erection.

I am able to give the following particulars from the reports as to the disposal of refuse:—

Acton.—Refuse is tipped on land adjoining the cemetery. A contract has been entered into for the erection of a dust destructor.

Brentford possesses a dust destructor.

Edmonton.—The dust is deposited on the sewage farm.

Feltham.—House refuse is deposited in old gravel pits and covered over with earth or road scrapings. The medical officer expresses his disapproval of this method and states that in the summer nuisance is caused by these deposits in cases where the gravel pit is in the vicinity of houses.

Finchley.—House refuse is taken to the sewage farm and is burnt in the open.

Friern Barnet.—Deposited on the sewage farm.

Hampton.—Deposited in a pit. The medical officer was obliged to complain of serious nuisance arising therefrom in the summer.

Harrow.—The consideration of the question of providing a dust destructor is suggested.

Hendon.—House refuse is taken to the sewage farm.

It is stated that this method is objectionable, as owing to the enormous number of flies which collect, the houses in the vicinity are at times “unbearable to live in.”

The erection of a dust destructor is recommended.

Heston and Isleworth.—The erection of a dust destructor was commenced during 1904.

Southall-Norwood.—The contractor for removal is bound by his contract to find his own shoot, a matter of great difficulty in this rapidly growing district. Disused sand and gravel pits are utilised.

A dust destructor is recommended.

Southgate.—Deposited on various shoots. The principal one is an old gravel pit, and at times much nuisance arises from it.

A dust destructor is recommended.

Tottenham.—The dust destructor was completed and opened for use in June, 1904.

Willesden.—Some of the refuse is removed from the district by barges, and some deposited on shoots.

A dust destructor is recommended.

Hendon (rural).—Deposited on shoots.

Staines (rural).—Deposited on shoots.

MORTUARY ACCOMMODATION.

The subject of mortuary accommodation is referred to in most of the reports. In that relating to Edmonton, some striking instances are given of the great use of a mortuary in a district the population of which contains families living in small houses or tenements with a small number of rooms.

That the necessary mortuary accommodation in the County is as yet but inadequately provided will be gathered from the following reports on the subject:—

Dr. Patten, in the Ealing report, states that during the year the old mortuary building has been altered and a post mortem room added. These improvements were much needed. The building is suitably fitted up for its purpose.

In Feltham there is no mortuary provision, but it is stated that plans have been prepared.

The Sanitary Authority of Friern Barnet has made arrangements for the use of the mortuary provided by the Finchley District Council.

Dr. Hope, in his report on Hanwell, writes—

“ Many complaints have again been made during
“ the year as to the want of proper and convenient
“ mortuary accommodation.”

He adds that a loan for the erection of a building has been sanctioned by the Local Government Board, and that plans have been prepared.

In the report on the urban district of Hendon the medical officer writes that during the year 22 bodies were brought to the mortuary. He states that—

“The present building is an iron one which is
“hardly suitable for the requirements of a district of
“this size,”

and that at times the temperature inside the building becomes unduly high. He expresses the hope that the District Council will provide a proper building.

In Southall-Norwood the subject of suitable accommodation has been under consideration, and as a result the District Council jointly with the Burial Board have obtained a site, and plans for the erection of a building have been prepared.

In the report on the urban district of Sunbury it is stated that the mortuary which has been provided “has been of great benefit to the district.” The parish of Shepperton in the rural district of Staines have made arrangements for utilizing this mortuary when necessary.

In the rural district of Staines the medical officer writes that accommodation is needed for the parishes of Ashford, Bedfont, Cranford, Harlington and Harmondsworth.

The need of mortuary accommodation in the urban district of Uxbridge was recently the subject of correspondence between the County Council and the District Council, and the medical officer reports that a site for a building has been obtained, but it is not stated that the erection of the building has yet commenced.

FACTORY AND WORKSHOP ACT.

The work which has been carried out in connection with the administration of the Factory and Workshop Act by sanitary authorities in the County during 1904, is summarized, as far as possible, in the following table. This table has been compiled from a more detailed form issued by the Secretary of State for Home Affairs to district medical officers with a view to "uniformity in the presentation of such particulars as lend themselves to statistical treatment."

Under Section 132 of the Factory and Workshop Act, 1901, each medical officer of health is required to report specifically on the administration of the Act in workshops and workplaces in his district, and to send a copy to the Secretary of State.

The majority of the reports contain a copy of the table with the particulars required.

COUNTY OF MIDDLESEX.

FACTORY AND WORKSHOP ACT.

Factory and Workshop Act.

219

District.	No. of Workshops on Register.		Total inspections of Factories, Workshops and Homeworkers' premises.		Defects.	Prosecutions.	If Sec. 22 P.H.A.A. Act adopted.	
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FOOD AND DRUGS ACT.

The following information as to the administration of the Food and Drugs Acts by the County Council is taken from the report presented by the General Purposes Committee to the Council, at their Meeting on May 25th, 1905.

The facts do not refer to the calendar year, but to the year ended 31st March, 1905. The information is included in this report for the convenience of local medical officers of health.

The facts in the report of the Committee are given in relation to the parishes in the County, but here they are rearranged so as to relate to sanitary districts.

The following table shows the number of samples taken in each sanitary district, together with the number adulterated and the number of convictions :—

	Number of Samples taken.	Number Adulter- ated.	Number of Con- victions.
<i>Urban.</i>			
Acton	179	10	9
Brentford	98	3	5
Chiswick	157	4	4
Ealing (<i>Borough</i>)	213	10	6
Edmonton	185	11	4
Enfield	135	5	4
Feltham	26	1	—
Finchley	214	2	—
Friern Barnet	46	1	1
Greenford	22	—	—
Hampton	60	4	5
Hampton Wick	26	2	1
Hanwell	85	5	4
Harrow	107	2	3
Hendon	113	2	2
Heston and Isleworth	159	8	9
Hornsey (<i>Borough</i>)	328	11	10
Kingsbury	37	2	2
Southall-Norwood	87	1	1
Southgate	54	1	1
Staines	95	3	3
Sunbury	33	—	—
Teddington	88	2	3
Tottenham	351	23	18
Twickenham	111	6	7
Uxbridge	132	1	1
Wealdstone	74	2	2
Wembley	46	2	2
Willesden	480	8	8
Wood Green	172	6	4
<i>Rural.</i>			
Hendon	129	2	2
South Mimms	41	—	—
Staines	143	8	3
Uxbridge	248	1	—
County	4,474	149	124

The number of adulterated samples in the County as a whole is 3·3 per cent. of the number taken, an increase of 1 per cent. on the previous year. This increase, it is stated, is limited to milk, spirits, and wines. The number of samples taken average 1 to every 207·1 persons in the County as compared with 1 to 236·7 persons in 1901. In London the average is stated in the report to be 1 to 233 persons, and in the provinces 1 to every 478 persons.

The following table shows the various articles of food and drugs which were examined during the year ended March 31st, 1905, and the number in each class which were found to be adulterated :—

	Number of Samples Examined.	Number Adulterated.
Beer	21	—
Bread	2	—
Butter	526	7
Coffee	62	—
Confectionery, Jam	170	—
Drugs	63	2
Flour	12	—
Lard	156	—
Margarine	195	3
Milk	2,662	126
Mustard	7	—
Pepper	51	—
Spirits	100	6
Sugar	6	—
Wine	28	4
Other articles	413	1
Total	4,474	149

In addition to the samples taken by the officers of the County Council, samples were also taken and sent to the County Analyst by officers of the sanitary authorities of Acton, Chiswick, Southall-Norwood, and Tottenham.

UNSOUND FOOD.

The subject of unsound food is dealt with in a number of the reports, and information to the following effect is given.

Acton.—Mr. Kinch, the sanitary inspector, reports that on visiting slaughter-houses and butchers' shops, he on two occasions found meat showing signs of tubercle. The diseased meat was destroyed by the owner on his attention being drawn to the matter.

No prosecutions have been taken during the year, but 7 articles or parcels of food were seized.

Brentford.—The sanitary inspector reports that on several occasions fruit, vegetables, fish and meat were surrendered and destroyed, and certificates given to the owners.

One prosecution was instituted for unsound meat. The prisoner was convicted and sentenced to one month's hard labour.

Chiswick.—The food supply is kept under careful supervision. One of the sanitary inspectors has qualified as a meat inspector.

Ealing.—Dr. Patten writes as follows :—

“In the course of the year a system of meat and
“ food inspection was set in action by the Council, and

“carried out by the senior sanitary inspector, who
“holds the necessary certificate of qualification for the
“duty. The total amount seized as diseased or un-
“sound was as follows, viz. :—Meat, 1,167 lbs.; fish,
“ $22\frac{3}{4}$ lbs.; and fruit and vegetables $85\frac{3}{4}$ lbs. In all
“instances, before being condemned, it was examined
“by myself and by a Justice of the Peace.

“As a sequence to these proceedings thirteen prose-
“cutions ensued, and fines and costs to the amount of
“£50 14s. 6d. were the result.”

Edmonton.—It is reported by the chief sanitary inspector that stalls and shops are regularly inspected, and during the year 11 seizures of unsound fish, meat and fruit were made.

Enfield.—Regular inspection is made of meat slaughtered and offered for sale in “the district, including the stalls in
“the markets at R.S.A. Factory and Enfield Town every
“week.” Fifteen parcels of meat and three of fish were surrendered and destroyed, with the owners’ permission, during the year.

Feltham.—Dr. Morris states as regards unsound food:—

“The only action taken with reference to this was
“in relation to some butcher’s meat that in my opinion
“did not come up to the proper standard, it was not
“seized in the ordinary way, but the butcher returned
“it to the wholesale firm that supplied it, and a cau-
“tion given. There can be no question that a large
“quantity of meat, just on the borderline of sound-
“ness does find its way to small purveyors in
“suburban districts, and the trade requires a very
“watchful eye.”

Hanwell.—On several occasions it was necessary to get owners to destroy unsound fish.

Harrow.—No unsound food has been discovered during the year.

Southall-Norwood.—No unsound food discovered during the year.

Tottenham.—It is reported that 2,162 inspections in connection with the food supply were made, and 26 articles or parcels of meat, fish and vegetables were seized or surrendered. Three prosecutions were made, and in each case a fine was inflicted varying from £5 to £20.

Uxbridge (urban).—The medical officer writes as follows:—

“An attempt has been made to supervise the food supply generally for the town. Several persons during the year have been cautioned about the unsatisfactory condition of food exposed for sale. Four seizures have been made, one of them being tuberculous pork exposed for sale in the market-place, and a conviction for this offence was obtained before the Magistrates in July, a penalty of £5 and costs being inflicted.”

Wealdstone.—Two cases of unsound food were brought to the notice of the sanitary staff.

Staines (rural).—It is reported that no seizures have been made during the year, but several cautions have been given and some surrenders have been made.

LEGISLATION.

The only legislation in 1904, relating to public health administration to which reference need be made in this report is the Acton Improvement Act, 1904. Amongst other provisions contained in this Act, important additional powers have been given to the District Council, with a view to checking the spread of infectious disease, and as regards the control of the milk supply of the district. Increased powers have also been given in connection with the occurrence of tuberculosis in the udder of the cow, in its relation to the milk supply.

Other powers relate to the provision of public slaughter-houses, to the registration and regulation of common lodging-houses and to sewerage and drainage.

PART II.

SUMMARY OF THE REPORTS OF THE
DISTRICT MEDICAL OFFICERS OF HEALTH.

ACTON URBAN DISTRICT.

Medical Officer of Health, G. A. Garry-Simpson, M.R.C.S.

Area in acres	2,304
<i>Census, 1901. Estimated, 1904.</i>	
Population ..	37,744 52,358
Birth-rate (1904)	27·6
Average birth-rate (1894-1903) ..	30·0
Death-rate (1904)	11·1
Average death-rate (1894-1903) ..	13·9
Zymotic death-rate (1904)	2·2
Infantile mortality	142

During recent years information has not been available for complete correction for outside deaths. The infantile mortality is much higher than in 1903, chiefly owing to epidemic diarrhoea.

The chief facts recorded in the report are—

The absence of the epidemic prevalence of disease.

The erection of an isolation hospital, which was practically completed at the end of the year, for the ordinary infectious diseases.

The difficulty of adequately dealing with cases of overcrowding, and the recommendation to put into force the by-laws relating to houses-let-in-lodgings.

The passing of the Acton Improvement Act, 1904, which contains important provisions as to tuberculosis in animals, and the control of the milk supply, slaughter-houses, common lodging-houses, infectious disease prevention, and certain sanitary provisions.

BRENTFORD URBAN DISTRICT.

Medical Officer of Health, Henry Bott, M.R.C.S., L.R.C.P.

Area in acres	1,091
	<i>Census, 1901. Estimated, 1904.</i>
Population ..	15,171 15,618
Birth-rate (1904)	34·8
Average birth-rate (1894–1903)	34·6
Death-rate (1904)	16·1
Average death-rate (1894–1903)	16·7
Zymotic death-rate (1904)	4·4
Infantile mortality (1904)	165

For the purpose of the above rates information appears not to have been available for full correction for outside deaths. There was an increase in the infantile mortality, the chief causes being measles and diarrhoea.

The matters chiefly dealt with in the report are—

A localised outbreak of smallpox in the early part of the year, which caused much anxiety. All the patients were related to each other, and there was evidence that they all arose from visiting each others houses.

An outbreak of typhoid fever, causing 22 cases and four deaths. The cases occurred mostly in houses which had been flooded by a polluted watercourse.

An epidemic of measles during May and June.

The sewage works and the isolation hospital, accounts of both of which are given.

CHISWICK URBAN DISTRICT.

Medical Officer of Health, F. C. Dodsworth, L.R.C.P.

Area in acres	1,249
	<i>Census, 1901. Estimated, 1904.</i>
Population ..	29,809 32,177
Birth-rate (1904)	27·6
Average birth-rate (1894-1903) ..	27 6
Death-rate (1904)	14·3
Average death-rate (1894-1903)	13·5
Zymotic death-rate (1904)	2·8
Infantile mortality	124

The general death-rate for 1904 shows an increase upon the average of the previous 10 years. It is probable that this is due in part to the fact that full correction has been made during this year for the deaths of residents in London hospitals, as arrangements have been made to obtain a return of these.

The matters chiefly referred to are—

The increase, as compared with 1903, of the infantile mortality rate due chiefly to measles, whooping cough, and diarrhoea.

The prevalence of measles and whooping cough during the spring and early part of the summer. Measles caused 39 deaths, of which 33 were under 5 years of age, and whooping cough 9 deaths, all under 5 years.

The extensive building operations which have taken place in the last two or three years, and consequent increase in population.

Reference to two groups of bad property, for which schemes under the Housing of the Working Classes Act are said to be under consideration.

The opening of the isolation hospital for ordinary infectious complaints.

EALING (BOROUGH).

Medical Officer of Health, C. A. Patten, L.R.C.P., M.R.C.S.

Area in acres	3,225
	<i>Census, 1901.</i> <i>Estimated, 1904.</i>
Population	33,031 43,780
Birth-rate (1904)	24·0
Average birth-rate (1894–1903)	19·3
Death-rate (1904)	11·3
Average (1894–1903)	9·9
Zymotic 1904	1·5
Infantile Mortality	105

So far as information was available, correction has been made in the above rates for residents dying outside the district. There has been a tendency during recent years to an increase in the birth-rate, which has been as low as 15·6 during the previous ten years. There is a satisfactory decrease in the infantile mortality. The zymotic rate is largely due to the occurrence of diarrhoea during the hot weather.

The more noteworthy matters referred to in the report are :—

The extension of the isolation hospital, some of the new buildings being nearly completed.

The rapid increase in the population of the district and the extensive erection of new houses which is taking place.

The institution during the year of a system of meat and food inspection, carried out by the senior sanitary inspector who is qualified by certificate as a meat inspector.

An account of the alterations and improvements which are being effected in regard to the sewage works and sewerage of the district.

Alteration and improvement of the mortuary.

EDMONTON URBAN DISTRICT.

Medical Officer of Health, A. W. J. MacFadden, M.B.,
C.M., D.P.H.

Area in acres	3,894
<i>Census, 1901. Estimated, 1904.</i>	
Population ..	46,899 53,358
Birth-rate (1904)	35·4
Average birth-rate (1894-1903)	33·8
Death-rate (1904)	15·8
Average death-rate (1894-1903)	16·0
Zymotic death-rate (1904)	3·8
Infantile mortality (1904)	161

Full correction has been made in regard to the above rates, allowing for the deaths of residents outside and for the deaths of non-residents dying in the district. Correction is also made for the population in institutions in the district but not belonging to it, viz.: Edmonton Union Workhouse and Infirmary, Strand Union Workhouse and Infirmary.

This is a comprehensive and complete report. The following matters may be specially referred to—

The increase in the infantile mortality, largely due to summer diarrhœa, on which subject a detailed report presented during the year is appended.

The appointment during the year of a female sanitary inspector which will enable the medical officer to take steps with a view to reducing the infantile mortality.

The absence of disease in an epidemic form.

The mild character of many of the cases of scarlet fever frequently not under medical attendance. An additional cause contributing to failure in obtaining medical advice in such cases is suggested, namely, the poverty prevailing in the district during the year.

The discontinuance of growing watercress on the farm used also for the treatment of sewage.

The decision to establish a laboratory for the examination bacteriologically of material from suspected cases of infectious disease.

Consideration of the question of the existing arrangements for isolation of smallpox and other infectious disease.

The revision of the by-laws as to houses-let-in-lodgings.

Consideration of the subject of sewage disposal by a committee specially appointed for the purpose, in view of the increase of Edmonton and Southgate, the sewage of which districts is dealt with on the same farm.

ENFIELD URBAN DISTRICT.

Medical Officer of Health, J. J. Ridge, M.D., B.S., B.A., etc.

Area in acres	..	..	12,601
	<i>Census, 1901.</i>		<i>Estimated, 1904</i>
Population	..	42,738	49,699
Birth-rate (1904) ..	..	..	28·7
Average birth-rate (1893–1904)	..	..	28·7
Death-rate (1904) ..	..	..	12·8
Average death-rate	..	..	13·9
Zymotic death-rate	..	..	3·5
Infantile mortality	..	..	158

Correction has been made in the case of the 1904 rates by excluding 16 deaths of non-residents, and including 1 death of a resident outside.

The infant mortality shows a considerable increase, chiefly due to epidemic diarrhoea. It is suggested that in some cases the use of so-called “comforters,” often put into the mouths of babies in a filthy condition, has in some cases influence in causing the complaint.

The matters chiefly referred to in the report are—

The causes of the high infant mortality.

The need of greater cleanliness in cowsheds and dairies.

The sanction of a loan by the Local Government Board for extension of the sewage works, which, for some time have been in an unsatisfactory condition, and in view of the increase of population.

The absence of any epidemic outbreak of disease.

FELTHAM URBAN DISTRICT.

Medical Officer of Health, C. D. Morris, L.R.C.P., M.R.C.S.

Area in acres	..	..	1,790.
	<i>Census, 1901. Estimated, 1904.</i>		
Population	..	4,534	5,560
Birth-rate (1904) ..	..	..	26·0
Death-rate (1904)	..	..	12·5
Zymotic death-rate (1904)	..	..	2·1
Infantile mortality (1904)	..	..	213

This district was only created in April, 1904. It previously formed part of the Staines Rural District. Hence rates for previous years are not available. The above rates are based on the figures relating to the whole of 1904, and correction is made by the addition of one death outside the district.

The more important matters dealt with in the report are—

An epidemic of measles in the early part of the year and consequent school closure.

The absence of diphtheria or scarlet fever to any great extent.

The need of isolation hospital accommodation for the ordinary infectious diseases and of a steam disinfecting apparatus.

The need of cheaper houses for working men.

The fact that a large number of houses still obtain their water supply from shallow wells, the water in which may become contaminated by leakage of the contents of cess-pools.

The need of a sewerage system. At present some of the sewage finds its way into a pond on the green, after passing through a filtering chamber.

The adoption during the year of the "model" regulations as to dairies, cowsheds, and milkshops.

The consideration by the sanitary authority of the question of providing mortuary accommodation, for which plans have been prepared.

FINCHLEY URBAN DISTRICT.

Medical Officer of Health, G. C. Taylor, M.A., M.D., D.P.H.

Area in acres	..	..	3,384.
<i>Census, 1901. Estimated, 1904.</i>			
Population ..	22,126		25,564
Birth-rate (1904) ..	..	..	24·8
Average birth-rate (1892–1901)		..	26·0
Death-rate (1904) ..	..	..	13·2
Average death-rate (1892–1901)		..	11·3
Zymotic death-rate (1904)	..	..	1·7
Infantile mortality (1904)	..	..	137

For the purpose of the above rates full correction has been made by including those of residents dying outside and excluding deaths of non-residents.

The more important matters referred to in the report are the following—

The increased infant mortality largely due to the prevalence of measles and summer diarrhoea, which also account for increase in the zymotic death-rate.

The difficulty of controlling the spread of scarlet fever owing to the mildness of the disease, which leads to the absence of medical attendance.

The adoption of voluntary notification of phthisis.

The water supply and method of sewage disposal, accounts of which are given.

An epidemic outbreak of illness characterized by high temperature and sore throat, the occurrence of which is associated with the milk supply. A special report on this is appended to the Annual Report. A similar outbreak occurred in 1894.

FRIERN BARNET URBAN DISTRICT.

Medical Officer of Health, F. A. Spreat, M.R.C.S., D.P.H.

Area in acres	1,303
	<i>Census, 1901. Estimated, 1904.</i>
Population (District)	9,145 9,758
„ (Asylum)	2,735 2,398
Birth-rate (1904)	30·3
Average birth-rate (1894–1903) ..	27·3
Death-rate (1904) .. .	10·9
Average death-rate (1894–1903) ..	10·6
Zymotic death-rate (1904)	2·3
Infantile mortality (1904)	108

For the purpose of the above rates, the population and deaths in the London County Asylum at Colney Hatch are excluded, and 4 deaths occurring outside the district are included. The infantile mortality shows a decrease on the average of the previous ten years, namely, 118 per 1,000 births, although there was an increase in the zymotic rate compared with the last few years, owing to prevalence of diarrhoea in July and August, 1904.

The more noteworthy matters referred to in the report are—

An outbreak of measles in January, and again in June, both in connection with public elementary schools.

An epidemic outbreak of sore throat, associated with high fever and nervous prostration, about the same time as a similar occurrence in an adjoining district, and which is also associated with the milk supply.

The need of providing isolation hospital accommodation. At present cases are sent to the hospitals of adjoining authorities, if these have beds to spare, but at times much difficulty and delay arises in getting patients removed.

The supply free of charge, to medical practitioners, of antitoxin for use in cases of diphtheria.

The sewage works, an account of which is given.

GREENFORD URBAN DISTRICT

Medical Officer of Health, G. Hope, L.R.C.P., M.R.C.S., D.P.H.

Area in acres	3,041
<i>Census, 1901. Estimated, 1904.</i>	
Population ..	819 1,092
Birth-rate (1904)	21·9
Death-rate (1904)	10·0

The total number of deaths was 11 as compared with 10 in 1903. Five of these were children under 1 year of age, namely, 2 from diarrhoea, 2 from tubercular disease, and 1 from heart disease. Only 2 cases of infectious disease were notified, 1 from scarlet fever, and 1 from erysipelas.

The district is so sparsely populated at present that there is little of note to record, but it is stated that increase is beginning to take place. The case of scarlet fever occurred in the person of a female who had recently given birth to a child.

HAMPTON URBAN DISTRICT.

Medical Officer of Health, Wentworth Tyndale, M.B.

Area in acres	2,036
	<i>Census, 1901. Estimated, 1904.</i>
Population ..	6,813 7,500
Birth-rate (1904)	31·0
Average birth-rate (1898–1903)	.. 25·6
Death-rate (1904)	13·3
Average death-rate (1898–1903)	.. 11·5
Zymotic death-rate	2·2
Infantile mortality	137

The following matters in the report are of chief interest.

The opening of the Isolation Hospital for cases of the ordinary infectious diseases.

Two severe outbreaks of measles, one at the beginning the other at the end of the year, both leading to school closure.

The occurrence of two cases of typhoid fever, one said to have been contracted by eating oysters while away from home, the other apparently from the former.

Nuisance caused by the disposal of house refuse in a disused gravel pit.

HAMPTON WICK URBAN DISTRICT.

Medical Officer of Health, Th. Günther, M.D.

Area in acres	1,314
	<i>Census, 1901. Estimated, 1904.</i>
Population ..	2,606 2,606
Birth-rate (1904)	18·4
Average Birth-rate (1894–1903)	20·5
Death-rate (1904)	11·5
Average Death-rate (1894–1903)	10·9
Zymotic Death-rate (1904) ..	0·3
Infantile Mortality	104

Correction has been made for four residents dying outside the district, and for one non-resident, who was found drowned in the river.

The matters to which reference may be made are—

The small amount of notifiable infectious disease during the year.

The fact that negotiations were commenced with Hampton with a view to providing isolation hospital accommodation for the district.

The completion of the work of disconnecting house drains from the surface water system of sewers.

HANWELL URBAN DISTRICT.

Medical Officer of Health, G. Hope, D.P.H., M.R.C.S.,
L.R.C.P.

Area in acres	1,067
<i>Census, 1901. Estimated, 1904.</i>	
Population ..	10,438 18,000
Birth-rate (1904)	29·6
Average birth-rate (1894–1903) ..	28·0
Death-rate (1904)	11·4
Average death-rate (1894–1903) ..	12·2
Zymotic death-rate (1904)	2·4
Infantile mortality (1904)	210

The infantile mortality shows a very large increase. In 1903 it was 130 per 1,000 births, and the average for the previous 10 years, 140.

Correction does not appear to have been made for deaths of residents occurring outside the district, and the rates have been calculated on the number of deaths *registered* in the district.

The more important matters referred to in the report are—

The high infant mortality. The plan of issuing printed instructions as to the care and feeding of infants, through the registrar of births and deaths has been adopted, but it is suggested that there is need for a properly established crèche.

The large number of deaths from diarrhoea during the third quarter of the year, which largely accounts for the high infantile mortality; thus, out of 35 deaths from this complaint, 31 were of infants under one year.

The need that exists for the provision of isolation hospital accommodation, and the suggestion that this could be best provided by joining with Greenford for the purpose.

The need of a disinfecting apparatus for articles of clothing, etc., the present arrangement (with Ealing) being regarded as expensive and unsatisfactory.

The difficulty of detecting cases of over-crowding.

The decision to erect a new mortuary, the need of proper accommodation having been the cause of complaint.

The decision of the Council to discontinue the practice of affording the means of bacteriological examinations in doubtful cases of diphtheria.

HARROW URBAN DISTRICT.

Medical Officer of Health, J. Fletcher Little, M.B., M.R.C.P.

Area in acres	2.028
	<i>Census, 1901. Estimated, 1904.</i>
Population ..	10,220 12,313
Birth-rate (1904)	22.4
Average birth-rate (1894-1902) ..	22.4
Death-rate (1904)	9.2
Average death-rate (1894-1903)	9.6
Zymotic death-rate	0.7
Infantile mortality	108

Correction has been made in calculating the above rates by the inclusion of the deaths of 10 residents dying outside.

The subjects of chief interest in this report are—

The recommendation that a quinquennial census shall be taken by the District Council in 1906.

The increase in the infantile mortality. The average of the previous 10 years was 98. Leaflets as to infant feeding are to be distributed by the Council through the registrar of birth and deaths.

The proposed extension of the isolation hospital, plans for which have been approved, and a loan sanctioned by the Local Government Board.

The desirability of “Mount Park district” in Northolt parish being transferred to the district of Harrow.

The recommendation as to the desirability of considering the question of providing a public slaughter-house, especially with a view to adequate inspection of the meat supply; also of a dust destructor for the disposal of house refuse.

HENDON URBAN DISTRICT.

Medical Officer of Health, F. W. Andrew, M.R.C.S., L.R.C.P.

Area in acres 8,382

Census, 1901. Estimated, 1904.

Population .. 22,450 24,931

Birth-rate (1904) 27·7

Average birth-rate (1894–1903).. .. 29·1

Death-rate (1904).. .. 12·1

Average death-rate (1894–1903) .. 12·5

Zymotic death-rate (1904) 1·9

Infantile mortality (1904) 137

The population given above includes that of institutions situated in but not entirely belonging to the district, namely: Cleveland Street Sick Asylum (Strand), and the workhouse and workhouse schools. Deducting the number of residents not belonging to the district, the population is estimated to be 24,449 and this total is used for statistical purposes. In arriving at the above rates exclusion has been made of non-residents dying in the district. No deaths of residents dying outside are included.

The matters chiefly commented on are—

The fact that the incidence of infectious disease was most marked in Central Hendon, the population of which is about a quarter of that of the whole district.

The increase of scarlet fever in Central Hendon, and its decrease in every other part of the district.

The need that exists for more isolation hospital accommodation for scarlet fever, and the provision of such accommodation for diphtheria. The existing scarlet fever hospital is a temporary structure.

The need for a proper mortuary. The present one is an iron structure.

The method of sewage treatment at the outfall works, and the need in the near future of alterations in order to deal with the increasing flow of sewage.

HESTON AND ISLEWORTH URBAN DISTRICT.

Medical Officer of Health, E. J. Steegmann, M.B., D.P.H.

Area in acres.. ..	6,859
	<i>Census, 1901. Estimated, 1904.</i>
Population ..	30,863 32,630
Birth-rate (1904)	32·3
Average birth-rate (1894-1903) ..	29·0
Death-rate (1904)	16·8
Average death-rate (1894-1903) ..	15·6
Zymotic death-rate (1904)	2·4
Infantile mortality	169

It is pointed out that the above estimate of population, which has been obtained according to the method adopted by the Registrar-General, is probably too low owing to the rapid development of the district which is taking place. If this is correct the birth-rates and death-rates are too high. The infantile mortality would not be affected, as this is based on the number of births. There is an increase in the death-rate and zymotic rate, and the infantile mortality is much above the average of the previous ten years, namely, 143 per 1,000 births.

The subjects which are chiefly referred to are—

The high infantile mortality, and the fact that a sub-committee to consider the question has been appointed.

The fact that there were no deaths from scarlet fever or typhoid fever, and a decreased number from diphtheria and whooping cough.

The absence of epidemic outbreak of disease.

The need of enlargement of the isolation hospital for ordinary infectious diseases (joint hospital with Richmond, Surrey).

The decision to erect a dust destructor, work in connection with which has been commenced; and alterations in the method of sewage disposal.

HORNSEY (BOROUGH).

Medical Officer of Health, H. Coates, M.D., D.P.H.

Area in Acres	..	..	2,874
	<i>Census, 1901.</i>		<i>Estimated, 1904.</i>
Population	..	72,056	84,227
Birth-rate (1904)	..	..	19·6
Average birth-rate (1894–1903)		..	21·0
Death-rate (1904)	..	..	8·19
Average death-rate (1894–1903)		..	8·77
Zymotic death-rate (1904)	..	..	0·81
Infantile mortality (1904)	..	..	86

Correction has been made in arriving at the above rates by the inclusion of the deaths of 33 residents which occurred outside the district and the exclusion of 3 registered in but which did not rightly belong to the district. The births have also been corrected by adding 12, which occurred in Edmonton workhouse.

The matters chiefly referred to in the report are—

The low death-rate, which is the lowest of all the large towns.

The small incidence of infectious disease.

The increased mortality from tuberculosis, which was 0·91 per 1,000 persons.

The issue by the authority of printed directions as to the care and feeding of infants.

The fact that out of 16 cases of typhoid, 7 contracted the disease outside the borough, and in 1 other case the cause was possibly due to contaminated shell fish.

A large increase in the number of premises now on the list for periodical inspection, *e.g.*, dairies, slaughter-houses, workshops.

KINGSBURY URBAN DISTRICT.

Medical Officer of Health, F. W. Andrew, M.R.C.S., L.R.C.P.

Area in acres	1,829
	<i>Census, 1901.</i> <i>Estimated, 1904.</i>
Population	757 791
Birth-rate (1904)	15·1
Death-rate (1904)	10·1
Zymotic death-rate (1904)	—
Infantile mortality	76

The total number of deaths was 8, including 1 under 1 year of age. No death occurred from any of the seven chief epidemic diseases.

No cases of the ordinary infectious complaints occurred, except two of scarlet fever.

Nearly all houses are now connected to the sewerage system.

SOUTHALL-NORWOOD URBAN DISTRICT.

Medical Officer of Health, J. D. Windle, M.D., Ch.B.

Area in acres	..	..	..	2,575
<i>Census, 1901. Estimated, 1904.</i>				
Population (District)	10,365			15,737
„ (Asylum)	2,835			2,855
Birth-rate (1904)	..	..	..	36·7
Average birth-rate (1891-1901)	..			31·3
Death-rate (1904)	..	..	..	12·3
Average death-rate (1891-1901)			..	14·1
Zymotic death-rate	..	..	.	1·9
Infantile mortality	..	..	..	147

For the above rates the population and deaths in the London County Asylum (Hanwell) are excluded, but the population of Marylebone Schools (412) is included.

The more noteworthy matters in the report are—

The rapid change from a rural to an urban character which has taken place in the district, the population of which is now largely made up of the working classes.

The satisfactory death-rate in view of these conditions.

The enforcement of the by-laws as to houses-let-in-lodgings more especially, with a view to prevent overcrowding.

The desirability of making some provision for the Sanatorium treatment of cases of phthisis.

An account of the prevalence of scarlet fever.

Consideration of the subject of infantile mortality.

Account of the method of disinfection in practice.

The decision to erect a new mortuary.

SOUTHGATE URBAN DISTRICT.

Medical Officer of Health, A. Sidney Ransome, B.A.,
M.B., D.P.H.

Area in acres	3,597
<i>Census, 1901. Estimated, 1904.</i>	
Population ..	14,993 19,000
Birth-rate (1904)	23·4
Average birth-rate (1894-1903) ..	24·6
Death-rate (1904)	9·0
Average death-rate (1894-1903) ..	10·7
Zymotic death-rate (1904)	0·7
Infantile mortality (1904)	81

Correction for the purpose of the above rates has been made by the inclusion of 11 deaths occurring outside the district and the exclusion of 15 deaths of non-residents.

The chief matters referred to are—

A considerable increase in population during the year.

The isolation hospital, a description of which is given, accompanied by a map.

The sewerage system and system of sewage disposal of the district.

The need of providing houses for the working classes in view of the demolition of cottage property which is being replaced by villa and shop property.

STAINES URBAN DISTRICT.

Medical Officer of Health, F. C. Tothill, M.B., C.M.

Area in acres	1905.
	<i>Census, 1901. Estimated, 1904.</i>
Population ..	6,688 6,856
Birth-rate (1904)	20·7
Average birth-rate (1894-1903)	27·8
Death-rate (1904)	10·2
Average death-rate (1894-1903) ..	12·9
Zymotic death-rate (1904)	0·4
Infantile mortality (1904)	147

Correction for the purpose of the above rates has been made by the inclusion of one death of a resident occurring outside the district.

The chief matters in the report are—

The small number of cases of notifiable infectious disease during the year.

The need of isolation hospital accommodation.

The need of a disinfecting apparatus.

SUNBURY URBAN DISTRICT.

Medical Officer of Health, C. Dwight Morris, M.R.C.S.,
L.S.A.

Area in acres	..	2,659.
	<i>Census, 1901.</i>	<i>Estimated, 1904.</i>
Population	4,544	4,580
Birth-rate (1904) ..	..	31·6
Average birth-rate (1896–1903) ..	..	29·3
Death-rate (1904) ..	..	19·2
Average death-rate (1896–1903)	..	13·4
Zymotic death-rate (1904) ..	..	5·6
Infantile mortality (1904) ..	..	158

For the purpose of the above rates, correction is made by the inclusion of the deaths of two residents outside the district.

The subjects chiefly dealt with in the report are—

The high death-rate, the highest during last 10 years, and the highest in the County during 1904.

The high zymotic rate and infantile mortality rate.

The prevalence of diphtheria throughout the greater part of the year. It was also prevalent in 1903. The prevalence of scarlet fever in latter half of year.

The absence of isolation hospital accommodation.

The need of a proper disinfecting apparatus.

The decision of the District Council to effect improvements in the sewerage system.

The need for adopting regulations under the Dairies, Cowsheds, and Milkshops Order.

TEDDINGTON URBAN DISTRICT.

Medical Officer of Health, Th. Günther, M.D.

Area in acres. 1,214

Census, 1901. Estimated, 1904.

Population . . . 14,037 16,000

Birth-rate (1904) 24·4

Average birth-rate (1894–1903) . . . 24·6

Death-rate (1904) 11·5

Average death-rate (1894–1903) . . . 12·3

Zymotic death-rate (1904) 1·3

Infantile mortality (1904) 133

For the purpose of the above rates corrections have been made, thus: deaths of non-residents excluded, 3, deaths of residents outside the district included, 14.

The matters chiefly referred to in this report are—

The relatively small number of cases of diphtheria and scarlet fever.

The need of isolation hospital accommodation and the fact that negotiations are pending with a view to arrangements being made for isolating patients at the hospital of the Hampton District Council.

The institution of a daily collection of house refuse throughout the district.

The framing of new by-laws.

TOTTENHAM URBAN DISTRICT.

Medical Officer of Health, J. F. Butler-Hogan, B.A.,
M.D., D.P.H.

Area in acres	3,013
	<i>Census, 1901. Estimated, 1904.</i>
Population ..	102,541 121,279
Birth-rate (1904)	29·5
Average birth-rate (1894–1903) ..	30·6
Death-rate (1904)	12·8
Average death-rate (1894–1903) ..	13·5
Zymotic death-rate (1904)	1·9
Infantile mortality	138

The death-rates for 1904 above are calculated on the number of deaths given in the annual summary of the Registrar-General, and the estimated population given by the medical officer of health.

The subjects dealt with in the report to which reference may be made are—

The prevalence of diphtheria during July to September.

Account of the causes which tend towards infantile mortality and infantile diarrhoea.

The advantage to be derived from the notification of cases of phthisis.

The necessity of greater care of children suffering from measles and whooping cough.

The opening of the dust destructor.

The discontinuance of the deposit in the district of refuse by a neighbouring sanitary authority in the County of London.

The desirability of improvement in the milk supply, and the advisability of the establishment of milk depôts by the local authority.

TWICKENHAM URBAN DISTRICT.

Medical Officer of Health, W. Marston Clark, M.R.C.S.
D.P.H.

Area in acres	..	..	..	2,421
	<i>Census, 1901. Estimated, 1904.</i>			
Population	..	20,991		26,000
Birth-rate (1904)	..	..	..	27·8
Average birth-rate (1894-1903)	..		..	26·5
Death-rate (1904)	..	..	..	12·4
Average death-rate (1894-1903)	..		..	12·6
Zymotic death-rate (1904)	..	..	..	1·8
Infantile mortality (1904)	..	..	..	150

Correction in the rates for 1904 has been made thus : outside deaths included, 11 ; deaths of non-residents excluded, 6.

The matters in the report which may be referred to are—

The absence of epidemic outbreak of disease, though there was considerable increase in the notifications of scarlet fever and of diphtheria.

The fact that the isolation hospital is a temporary one, rented by the authority.

Infringement of the bye-laws as to open space about buildings.

UXBRIDGE URBAN DISTRICT.

Medical Officer of Health, F. W. Beville, L.R.C.P.,
M.R.C.S.

Area in acres 868

Census, 1901. Estimated, 1904.

Population ..	8,585	8,919
Birth-rate (1904) .. ..	..	29·2
Average birth-rate (1894–1903) ..	..	25·9
Death-rate (1904) .. ..	..	14·3
Average death-rate (1904) ..	..	16·9
Zymotic death-rate (1904) ..	..	1·3
Infantile mortality (1904) ..	..	111

Correction has been made in the death-rates, 1904, by including 23 deaths occurring outside district and excluding 3 deaths of non-residents.

The subjects dealt with in the report which may be referred to are—

The freedom of the district from infectious disease.

The need of a disinfecting apparatus.

An isolation hospital is provided jointly with the rural district of Uxbridge but there is no disinfecting apparatus.

The need of a mortuary. This has been the subject of correspondence with the County Council, and a site for the purpose has been obtained.

WEALDSTONE URBAN DISTRICT.

Medical Officer of Health, G. H. Butler, L.R.C.P.,
M.R.C.S.

Area in acres	1,061
<i>Census, 1901. Estimated, 1904.</i>	
Population ..	5,901 8,940
Birth-rate (1904)	33·7
Average birth-rate (1894–1903)	.. 28·4
Death-rate (1904)	8·7
Average death-rate (1894–1903)	.. 9·7
Zymotic death-rate (1904)	.. 1·0
Infantile mortality (1904)	.. 113

Correction is made in the rates for 1904 by the inclusion of 3 deaths occurring outside the district.

The matters chiefly referred to are—

The mild form characterizing the cases of scarlet fever.

The need for greater care in regard to the way in which cases of whooping cough are dealt with by parents and others.

The difficulty of dealing with cases of overcrowding owing to high rents of working class dwellings.

The completion of improvements at the sewage disposal works.

WEMBLEY URBAN DISTRICT.

Medical Officer of Health, C. E. Goddard, M.D.

Area in acres	..	..	4,564
	<i>Census, 1901.</i>		<i>Estimated, 1904.</i>
Population ..	4,519		5,200
Birth-rate (1904) ..	..	..	27·6
Average birth-rate (1894–1903) ..		..	24·4
Death-rate (1904) .	..	..	11·2
Average death-rate (1894–1903)		..	10·0
Zymotic death-rate (1904)	..	..	1·9
Infantile mortality (1904)	..	..	125

The subjects chiefly referred to in the report are—

The high infantile mortality.

The absence of scarlet fever and the small amount of notifiable infectious diseases.

The substitution of a weekly in place of a fortnightly collection of house refuse.

The adoption of regulations under the Dairies, Cowsheds, and Milkshops Order.

The nuisance from piggeries, the deposit of house refuse from London in the district, and the plague of flies owing to this and the carriage of putrescible matter through the district.

WILLESDEN URBAN DISTRICT.

Medical Officer of Health, W. Butler, M.B., C.M., D.P.H.

Census, 1901. Estimated, 1904.

Population	114,811	134,539
Birth-rate (1904)	32·8
Average birth-rate (1895-1903)	31·5
Death-rate (1904)	12·2
Average death-rate (1895-1903)	..	14·0
Zymotic death-rate (1904)	1·7
Infantile mortality (1904)	110

Complete correction is made for deaths of residents occurring outside the district. These were 180 in 1904.

The subjects dealt with in the report to which reference may be made are—

The well-maintained birth-rate.

The lowest recorded death-rate since the passing of the Public Health Act, 1875.

An interesting analysis of the distribution of deaths in the several wards and the death-rates of each.

The satisfactory results of visitation by lady health visitors to houses where births have occurred, as shown in a continued reduction of the deaths of infants under one year of age.

A localized outbreak of smallpox, of which account is given.

The subject of the sewage disposal of the “Brent area” of the district.

The action taken under the Housing of the Working Classes Act.

An account of the new isolation hospital buildings by Dr. Stewart, the Medical Superintendent.

WOOD GREEN URBAN DISTRICT.

Medical Officer of Health, G. H. Conolly, M.R.C.S.

Area in acres	1,625
	<i>Census, 1901. Estimated, 1904.</i>
Population ..	34,233 40,930
Birth-rate (1904)	28·3
Average birth-rate (1894–1903) ..	28·9
Death-rate (1904)	11·3
Average death-rate (1894–1903) ..	11·8
Zymotic death-rate (1904)	2·4
Infantile mortality	125

Correction has been made in the rates for 1904 by including 22 deaths of residents occurring outside the district, and excluding 10 deaths of non-residents.

The matters in this report which may be referred to are—

The prevalence of diphtheria, which was most marked in July.

The rapid increase taking place in this district. During the year 1,077 houses were in course of erection.

The temporary arrangements as to isolation hospital accommodation and the consideration by the authority of the matter of providing permanent accommodation.

HENDON RURAL DISTRICT.

Medical Officer of Health, B. Campbell Gowan, M.R.C.S.,
L.R.C.P.

Area in acres..	..	..	11,321
<i>Census, 1901. Estimated, 1904.</i>			
Population ..	8,647		11,046
Birth-rate (1904) ..	..	..	18·8
Average birth-rate (1895-1903)..		..	21·6
Death-rate (1904) ..	..	..	7·8
Average death-rate (1895-1903)		..	10·0
Zymotic death-rate	..	..	0·1
Infantile mortality	..	..	91

The subjects dealt with in this report to which reference may be made are—

The low and decreasing birth-rate.

The absence of scarlet fever or diphtheria in epidemic form and the fact that scarlet fever, which had been prevalent in the two previous years in an institution in the district, has now practically ceased there.

The desirability of notification of cases of phthisis.

The usefulness of the isolation hospital as a means in preventing the spread of infectious disease, in contrast to which reference is made to an epidemic of scarlet fever, due to an imported case, some years back when no hospital existed.

SOUTH MIMMS RURAL DISTRICT.

Medical Officer of Health, W. Gruggen, L.R.C.P., M.R.C.S.

Area in acres	6,105
<i>Census, 1901. Estimated, 1904.</i>	
Population ..	2,671 2,766
Birth-rate (1904)	19.5
Death-rate (1904).. .. .	13.3
Zymotic death-rate (1904)	1.0
Infantile mortality (1904)	148

Attention is called to the need of accommodation for the isolation of cases of infectious disease.

It is recommended that new regulations under the Dairies, Cowsheds, and Milkshops Order be made, and that the services of a veterinary surgeon be engaged when necessary.

STAINES RURAL DISTRICT.

Medical Officer of Health, C. Dwight Morris, M.R.C.S.,
L.R.C.P.

Area in acres.	18,035
<i>Census, 1901. Estimated, 1904.</i>	
Population	18,095 18,737
Birth-rate (1904)	28·2
Death-rate (1904)	17·0
Zymotic death-rate (1904)	1·2
Infantile mortality (1904)	164

Owing to the separation of the parish of Feltham, which became a separate urban district in April, 1904, comparable rates for previous years are not available. The deaths, &c., in Feltham during the first three months of the year have been included in the rates of that district.

The population given above includes that of certain institutions.

In the above rates correction has been made for the deaths of 5 residents occurring outside the district.

The more important subjects referred to in the report are—

The prevalence of measles.

An outbreak of diphtheria at the Welsh Schools at Ashford.

The prevalence of scarlet fever and the difficulty in checking its spread owing to the mild character of the complaint.

The need of isolation hospital accommodation for ordinary infectious disease.

The need of a disinfecting apparatus.

The need of mortuary accommodation for some of the parishes.

The need of improved water supply for many houses.

The system of sewage disposal in the various parts of the district, there being no sewage works.

The subject of the existing arrangements for sanitary inspection of the district, which, it is stated, are the same as they were twenty years ago, and are adversely criticised.

UXBRIDGE RURAL DISTRICT.

Medical Officer of Health, A. Charpentier, M.D., D.P.H.

Area in acres	..	..	..	23,415.
	<i>Census, 1901. Estimated, 1901.</i>			
Population	..	17,218		18,206
Birth-rate (1904)	..	..	..	23·5
Average birth-rate (1894-1903)	..		..	29·4
Death-rate (1904)	..	..	..	13·1
Average death-rate (1894-1903)	..		..	14·7
Zymotic death-rate (1904)	..	..	..	1·6
Infantile mortality (1904)	..	..	..	130

In the above, the figures relating to Hayes, and Ruislip-Northwood are included for the whole year, although each of these parishes became separate sanitary districts in October, 1904, but there are no separate reports for these.

The chief subjects referred to are—

The occurrence of scarlet fever in Hayes and Harefield and of diphtheria in Hayes and Yiewsley.

The inadequacy of the joint isolation hospital for Uxbridge urban and rural districts, which has at times been much overcrowded.

It is suggested that the hospital be enlarged or limited to the urban district of Uxbridge and the rural district as it now is, after the separation of Hayes and Ruislip-Northwood.

The need of a disinfecting apparatus.

TABLES.

274
COUNTY OF MIDDLESEX.—

NAME OF SANITARY DISTRICT.	Inspections.		Notices.				
	Complaints Received.	Total Number of Inspections and Re-inspections.	Cautinary Notices Given.	Statutory Orders Issued.	Summonses Served.	Convictions Obtained.	
<i>Urban.</i>							
Acton	3,715	6,197	1,187	63	..	..
Brentford	89	3,072	62	259	..	..
Chiswick	90	7,092	..	1,021	..	..
Ealing (<i>Borough</i>) ..	142	6,287	358	44	..	..
Edmonton	62	13,716	1,994	121	2	2	
Enfield	52	13,208	1,284	183	..	..
Feltham	12	179	..	34	..	..
Finchley	131	5,379	416	182	..	..
Friern Barnet	19	3,325	141	36	5	5	
Greenford	7	46	15	..	..	..
Hampton	39	2,678	193	10	1	1	
Hampton Wick .. ..	..	279	..	..	..	..
Hanwell	63	2,332	3	78	..	..
Harrow	55	756	7	1	..	..
Hendon	73	..	150	65	..	..
Heston and Isleworth	63	15,573	2,669	154	1	1	
Hornsey (<i>Borough</i>) ..	251	7,179	901	138	4	3*	
Kingsbury .. ..	..	..	..	..	..	..
Southall-Norwood ..	..	301	345	..	..	..
Southgate	41	2,906	79	28	..	..
Staines .. ..	..	298	..	79	..	..
Sunbury	29	316	16	16	16	16	
Teddington	39	2,208	8	8	..	..
Tottenham	611	32,271	3,031	598	6	5	
Twickenham	123	4,241	94	567	..	..
Uxbridge .. ..	..	..	..	..	..	..
Wealdstone	15	..	15	6	..	..
Wembley	27	950	..	60	4	4	
Willesden	773	10,924	1,457	343	21	21	
Wood Green	110	4,958	347	281	18	13	
<i>Rural.</i>							
Hendon	54	1,854	323	24	2	2	
South Mimms .. ..	..	..	..	..	..	..
	about						
Staines	40	2,463	362	125	2	2	
Uxbridge	59	2,979	39	95	..	..

* One summons withdrawn on payment of cost.

SANITARY WORK, 1904.

Dwelling Houses.					Houses let in separate Dwellings or Lodgings.			Common Lodging Houses.		
Houses, Premises, &c., Cleansed, Repaired, &c.	Closed as Unfit for Habitation.	Re-opened after Repairs, Alterations, &c.	Demolished.	Illegal Underground Dwellings Vacated.	Number Registered under By-laws.	Periodical Frequency or Number of Inspections.	Number of Contraventions.	Number Registered under By-laws.	Periodical Frequency or Number of Inspections.	Number of Contraventions.
453	24	..	..	..	..	..	..	2	Regu- larly	..
109	..	..	..	..	..	..	..	7	87	1
372	..	..	4	..	61	93	..	..	..	..
33	..	..	..	..	..	..	..	..	..	..
280	..	..	..	..	..	..	..	1	157	..
247	3	..	..	..	..	..	..	..	..	..
..
..
218	..	..	1	..	..	..	..	..	..	..
9	..	..	4	..	..	..	..	..	..	..
21	5	..	9	..	..	..	..	..	..	..
..
110	2	2	..	..	18	20	..	..	..	..
89	..	..	..	..	..	..	..	..	..	..
54	1	..	..	..	..	..	..	..	..	..
270	4	..	9	..	2	189	11	2	96	..
110	..	..	2	..	..	..	..	..	..	..
..
..
111	2	..	..	..	..	..	..	..	..	..
2	..	..	..	..	..	..	..	1	2	..
26	23	..	7	..	..	..	..	..	..	..
41	..	..	..	..	No	by-laws	s.	None	in district	..
670	9	..	29	..	20	Fre- quently	..	4	158	..
285	2	2	..	..	..	..	..	..	..	..
..	..	..	..	..	..	..	..	14	..	..
14	..	..	..	..	..	..	..	..	..	..
..	1	..	..	..	..	..	..	13	†	12
64	5	..	..	2	..	..	..	..	..	..
50	No	by-laws	s.	No	by-laws.	..
47	6	..	8	2	6	2
..
15	7	..	7
39	1

† Every three weeks and also by night.

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COUNTY OF MIDDLESEX.—

NAME OF SANITARY DISTRICT.	Canal Boats used as Dwellings.			Movable Dwellings, Caravans, Tents, &c.		
	Number Registered under the Acts.	Periodical Frequency or Number of Inspections.	Number of Contraventions of Regulations.	Number Observed during the Year.	Number of Nuisances therefrom Abated.	Number Removed from District.
<i>Urban.</i>						
Acton	11	..	..
Brentford	304	104	8	..	..	..
Chiswick
Ealing (<i>Borough</i>)	33	..	33
Edmonton	72	10	592	1	Removed almost daily.
Enfield	31	..	31
Feltham
Finchley
Friern Barnet	167	25	167
Greenford
Hampton	4	..	2	..	2
Hampton Wick
Hanwell	51	8	1	1	..
Harrow	5	12	..
Hendon	3	..	3
Heston and Isleworth	306	61	38	7	5
Hornsey (<i>Borough</i>)
Kingsbury
Southall-Norwood	100	6	..	..	..
Southgate	229
Staines	3	..	30	..	28
Sunbury	7	1	1
Teddington
Tottenham	41	..	41
Twickenham	6	..	6
Uxbridge
Wealdstone	7
Wembley	100	..	..
Willesden	83	12	41	..	41
Wood Green	No	by-laws	..	35	..	35
<i>Rural.</i>						
Hendon	75	..	15
South Mimms
Staines	5	5	5
Uxbridge	2	2	2

SANITARY WORK, 1904.

Workshops and Work-places.			Laundries.			Bakehouses.		
Number in District.	Periodical Frequency or Number of Inspections.	Contraventions of Factory Acts.	Number in District.	Periodical Frequency or Number of Inspections.	Contraventions of Factory Acts.	Number in District.	Periodical Frequency or Number of Inspections.	Contraventions of Factory Acts.
100	411	..	256	..	..	8	..	2
62	124	5	..	..	..	12	..	..
181	215	8	18	23	1	15	60	..
184	$\frac{1}{2}$ -yearly	..	..	..	..	27	Quarterly	..
160	323	3	32	82	2	32	171	6
128	4	33	8	4	1	36	4	29
4	Quarterly	..	..	..	..	3	Quarterly	..
110	Periodically	..	..	..	..	14	All	..
13	52	..	10	40	..	7	49	4
1	10	..	..	..	..	..	..	..
14	26	1	4	8	..	9	31	8
11	Frequently	2	..	..	..	2	Frequently	2
18	32	1	12	24	2	9	59	7
20	Quarterly	..	2	Quarterly	..	11	Quarterly	..
..
203	257	16	16	60	..	36	149	3
231	570	67	20	Frequently	15	40	96	20
..
25	..	..	5	..	..	12	..	..
36	42	..	..	..	..	13	53	..
87	..	..	5	..	..	11	..	..
3	5	..	5	12	..	4	9	..
37	$\frac{1}{2}$ -yearly	1	7	3	1	13	$\frac{1}{2}$ -yearly	1
308	493	..	39	189	..	55	122	..
136	Frequently	..	49	Frequently	5	18	Frequently	..
..
35	Occasionally	4	2	Occasionally	..	5	Quarterly	4
..	30	..	3	$\frac{1}{2}$ -yearly	..	5	$\frac{1}{2}$ -yearly	..
198	1,215	147	153	254	9	59	104	49
107	225	..	11	23	..	16	61	..
12	33	3	..	..	..	8	24	1
..
..	..	..	..	..	..	20	Occasionally	..
51	$\frac{1}{2}$ -yearly	..	8	$\frac{1}{2}$ -yearly	..	14	16	..

COUNTY OF MIDDLESEX.—

NAME OF SANITARY DISTRICT.	Slaughter-houses.			Cow-sheds.		
	Number on Register.	Periodical Frequency or Number of Inspections.	Contraventions of By-laws.	Number on Register.	Periodical Frequency or Number of Inspections.	Contraventions of Regulations.
<i>Urban.</i>						
Acton	4	48	..	3	18	1
Brentford .. ..	..	..	..	..	..	..
Chiswick	7	28	..	2	8	..
Ealing (<i>Borough</i>) ..	5	Quarterly	..	8	Quarterly	..
Edmonton	6	97	2	4	30	3
Enfield	16	Frequently	14	32	4	21
Feltham	3	Quarterly	..	..	..	..
Finehley	11	43	..	9	76	..
Friern Barnet.. ..	2	20	..	5	30	3
Greenford .. ..	..	..	..	7	10	..
Hampton	5	18	4	7	20	4
Hampton Wick ..	2	Frequently	2	1	Frequently	1
Hanwell	4	10	2	3	10	..
Harrow	7	Quarterly	..	9	Quarterly	..
Hendon .. ..	..	..	..	..	..	..
Heston and Isleworth	14	177	4	18	163	4
Hornsey (<i>Borough</i>) ..	10	59	15	4	9	..
Kingsbury .. ..	..	..	..	..	..	..
Southall-Norwood ..	5	..	..	7	..	..
Southgate	8	63	..	9	38	..
Staines	3	Periodically	..	13	Quarterly	2
Sunbury	2	4	..	5	11	..
Teddington	5	Frequently	..	10	Frequently	12
Tottenham	17	288	..	20	118	..
Twickenham	10	Frequently	..	8	Frequently	..
Uxbridge .. ..	..	..	..	..	..	..
Wealdstone	3	Quarterly	..	3	Quarterly	1
Wembley	3	Monthly	..	12	Quarterly	4
Willesden	10	15	6	6	15	2
Wood Green	5	118	..	4	23	..
<i>Rural.</i>						
Hendon	9	94	3	16	87	14
South Mimms .. ..	..	..	..	..	..	..
Staines .. ..	..	$\frac{1}{2}$ -yearly	..	..	$\frac{1}{2}$ -yearly	..
Uxbridge	12	$\frac{1}{2}$ -yearly	..	77	$\frac{1}{2}$ -yearly	2

SANITARY WORK, 1904.

Dairies and Milkshops.			Unsound Food.		Adulterated Food.		Offensive trades.		
Number on Register.	Periodical Frequency or Number of Inspections.	Contraventions of By-laws.	Animals seized.	Articles or parcels seized.	Samples taken.	Found adulterated.	Number of Premises in District.	Periodical Frequency or Number of Inspections.	Contraventions of By-laws.
68	141	..	..	7	..	..	..	..	..
38									
29	116	2	..	..	122	6	..	..	..
34	Quarterly	..	..	34	..	..	..	..	..
54	129	2	..	11	..	..	..	..	..
64	Frequently	18	..	20	..	..	..	..	..
2	..	..	..	..	..	..	..	..	..
18	..	..	..	5	..	..	..	..	..
13	52	..	..	..	4	2	..	..	..
..	..	..	..	..	..	..	1	10	3
5	7	0	..	..	..	..	1	2	0
2	Frequently	2	..	..	..	..	..	..	..
18	32	1	..	..	..	..	..	..	..
5	Quarterly	..	..	..	..	..	..	..	..
..
43	925	3	..	2	..	..	2	112	..
66	162	22	..	6	290	4	..	..	..
..
11	..	..	..	..	30	1	..	..	..
15	43	..	..	3*	..	..	..	..	..
10	Quarterly	..	24	1	..	..	1	6	..
3	6	..	..	..	..	..	..	..	..
20	Frequently	1	..	..	..	..	..	..	..
181	333	..	..	26	..	..	..	..	..
36	Frequently	..	24	6	..	..	..	..	..
..	..	..	..	4	..	..	..	..	..
9	Quarterly	..	2	..	..	..	..	..	..
13	Frequently	..	..	..	..	..	1	..	..
107	264	23	..	1	..	..	..	..	..
40	159	..	..	..	..	..	..	..	..
4	17	4	3	1	1	..	..	..	..
..
..	$\frac{1}{2}$ -yearly	..	..	..	..	..	..	..	..
..

* Surrendered.

COUNTY OF MIDDLESEX.—

NAME OF SANITARY DISTRICT.	Mortuaries.		Water Supply				
	Accommodation.	Number of bodies received.	Wells.			Houses, Water Laid on to.	Percentage of Houses Supplied from Mains.
			New, Sunk.	Cleansed, Repaired, Etc.	Closed as Polluted.		
<i>Urban.</i>							
Acton	3	35	..	..	..	4	..
Brentford	1	..	..	..	..	..	..
Chiswick .. ..	..	..	..	..	..	all	40
Ealing (<i>Borough</i>) .. ..	..	..	..	..	2	..	..
Edmonton	6	112	..	..	3	3	99·3
Enfield .. ..	..	..	..	2	..	15	..
Feltham .. ..	..	None	..	..	..	..	..
Finchley .. ..	..	..	..	2	..	..	..
Friern Barnet .. ..	..	..	..	..	..	..	..
Greenford .. ..	..	..	..	..	..	10	93
Hampton	2	11	..	..	..	6	99
Hampton Wick	2	3	..	..	..	..	..
Hanwell	7	..	..	..	..	7	99·5
Harrow	2	5	..	..	1	3	100
Hendon .. ..	..	22	..	..	..	..	..
Heston and Isleworth	2	17	..	1	1	37	99
Hornsey (<i>Borough</i>)	6	42	..	..	4	8	*
Kingsbury .. ..	..	..	..	..	No	tables	
Southall-Norwood .. ..	..	..	..	..	..	..	..
Southgate	1	9	..	1	1	2	..
Staines	Ample	..	5	..	..	..	96
Sunbury	1	4	1	3	3	65	over 90
Teddington	1	..	..	..	1	..	..
Tottenham	9	185	..	..	..	..	100
Twickenham	4	16	..	..	..	27	..
Uxbridge .. ..	..	..	..	..	No	tables	
Wealdstone	1	3	..	..	..	..	..
Wembley	4	6	..	..	..	†	100
Willesden .. ..	..	..	..	..	..	all	all
Wood Green .. ..	..	..	..	..	..	..	100
<i>Rural.</i>							
Hendon .. ..	..	..	1	..	2	5	..
South Mimms .. ..	..	..	..	..	..	..	..
Staines .. ..	..	..	27	18	13	99	..
Uxbridge .. ..	..	..	..	6	..	41	..

* All excepting few isolated cottages.

† Every new house and 1 old.

SANITARY WORK, 1904.

and Water Service.						Privy and Ash Pits, Ash and Earth Closets.		
Cisterns.			Flush Cisterns Provided to W.C.'s.	Draw-Taps Removed from Cisterns to Mains.	Percentage of Houses Supplied on Constant System.	Above Ground Receptacles Substituted for Pits.	Movable Receptacles Substituted for Fixed.	Water Closets Substituted for Dry Receptacles.
New, Provided.	Cleansed, Repaired, Covered.	Overflow Pipes Disconnected from Drains.						
..	58	..	123	..	..	293	..	..
..	118	..	9	..	..	..	..	..
..	4	..	..	193	100	..	..	..
3	5	..	..	35	..	..	..	..
11	166	..	1	3	98.7	..	..	..
17	134	..	33	..	..	4	..	..
..	..	..	..	..	70	9	9	..
6	34	3	72	..	..	..	..	..
..
1	1	..	..	..	93	..	..	..
3	5	..	21	..	99	..	..	3
..
..	3	1	..	..	99.5	..	..	..
..	5	..	38	..	100	..	..	..
11	21	..	25	..	..	..	12	..
10	51	..	5	..	100	..	1	..
8	37	3	78	9	‡	..	15	1
..
..	9	..	..	..	..	..	..	..
2	18	..	52	19	90	..	..	2
..	5	..	..	..	90	..	..	..
39	..	..	..	..	over 90	4	5	..
2	16	..	6	..	..	..	..	..
..	161	..	..	..	..	..	10	..
69	80	..	106	..	..	..	36	..
..
..	2	..	..	..	..	..	..	..
..	6	..	3	1	100	..	..	..
46	170	10	64	41	100
9	31	..	23
..	1	..	7	1	..
..
90	82	6	6	..
..	73	2

‡ All excepting few isolated cottages.

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COUNTY OF MIDDLESEX.—

NAME OF SANITARY DISTRICT.	Drainage					
	Water Closets,					Percentage of Houses Provided with Water Closets.
	New Constructed.	New Apparatus Provided.	Repaired, Cleansed, &c.	Supplied with Water, or Supply Rendered Efficient.	Ventilated.	
<i>Urban.</i>						
Acton	6	..	45	..	..	..
Brentford	1	..	56	..	..	..
Chiswick	65	..	47	145	..	100
Ealing (<i>Borough</i>) ..	6	140	44	107	2	..
Edmonton	2	145	162	103	2	99·9
Enfield	13	6	89	352	1	..
Feltham .. ..	..	..	..	..	..	7·5
Finchley .. ..	..	71	15	..	..	..
Friern Barnet.. ..	..	..	..	..	..	..
Greenford	10	..	6	..	..	43
Hampton	5	26	26	21	8	99
Hampton Wick ..	..	..	..	..	..	..
Hanwell	60	2	19	60	..	99·5
Harrow	85	46	69	71	58	99
Hendon	10	15	13	51	..	..
Heston and Isleworth	7	78	178	172	..	99
Hornsey (<i>Borough</i>) ..	4	177	88	30	43	100
Kingsbury .. ..	..	..	..	..	..	..
Southall-Norwood ..	..	14	14	18	..	..
Southgate	10	67	63	..	..	*
Staines	52	..	7	..	..	85
Sunbury	48	54	..	54	54	over 90
Teddington .. ..	..	27	37	76	6	..
Tottenham .. ..	..	80	117	216	8	100
Twickenham	15	77	139	123	7	..
Uxbridge .. ..	..	..	..	..	..	..
Wealdstone	4	3	16	..	2	..
Wembley	2	3	..	2	..	99
Willesden	20	61	32	98	12	100
Wood Green .. ..	..	104	17	24	..	100
<i>Rural.</i>						
Hendon	5	23	30	42	..	..
South Mimms.. ..	..	..	..	..	..	..
Staines	82	82	..	..	..	..
Uxbridge	38	40	7	10	..	..

* Practically the whole.

SANITARY WORK, 1904.

and Sewerage.

Drains.						
Examined, Tested, Exposed, etc.	Unstopped, Repaired, Trapped, etc.	Waste Pipes, Rain Water Pipes, etc., Discon- nected.	Soil Pipes and Drains Ventilated.	Disconnecting Traps or Chambers Inserted.	Reconstructed.	New laid.
..	260	217	39	..	49	..
457	87	12	..	..	153	..
229	81	107	46	..	67	..
188	109	76	30	139	67	1
442	276	9	74	117	119	..
208	252	13	73	63	129	38
85	23	1	2	..	1	2
203	132	33	150	98	154	..
..
16	5	..	..	1	2	18
18	147	4	22	39	24	1
..
93	127	34	17	19	38	6
174	63	27	25	39	29	30
..	20	..	7	15	13	9
291	321	54	158	4	20	20
357	167	153	101	35	142	12
..
..	64	..	..	..	..	..
79	36	48	42	63	75	..
..	11	..	..	..	..	26
72	6	..	..	..	..	..
16	172	..	12	6	10	..
2,054	326	215	111	12	560	..
49	172	39	54	35	24	..
..
18	31	..	9	2	2	1
100	8	..	..	2	2	All new houses.
853	96	15	82	63	195	134
124	79	120	48	74	122	..
93	65	1	3	13	21	3
..
..	149	16	82	82	33	35
6	8	..	3	..	40	40

NAME OF SANITARY DISTRICT.	Drainage and Sewerage.				
	Cesspools.		Percentage of Houses Draining into Sewers.	Sewers.	
	Rendered Impervious, Emptied, Cleansed, etc.	Abolished, and Drain Connected to Sewer.		Yards of New Sewers Laid.	Yards of Sewers Reconstructed.
<i>Urban.</i>					
Acton .. ..	..	..	..	3,398	..
Brentford .. ..	..	..	5	..	..
Chiswick .. ..	..	..	..	100	..
Ealing (<i>Borough</i>) ..	1	1	..	..	..
Edmonton .. ..	..	..	1	99·5	9,128
Enfield	254	5	..	..	744
Feltham	257	..	..	*	*
Finchley .. ..	..	7	..	..	..
Friern Barnet .. ..	..	..	..	..	..
Greenford .. ..	..	..	..	..	..
Hampton	19	15	91	880†	1,673†
Hampton Wick .. ..	..	..	..	..	..
Hanwell .. ..	..	..	99·5	..	..
Harrow .. ..	..	..	99	147	93
Hendon	7	..	..	..	..
Heston and Isleworth	10	3	..	..	..
Hornsey (<i>Borough</i>) ..	..	9	100	..	..
Kingsbury .. ..	..	..	..	..	..
Southall-Norwood ..	14	..	..	..	..
Southgate	1	2	99	8,369	782
Staines	1	..	95	870	..
Sunbury	2	30	over 90	257	..
Teddington	10	..	..	..	..
Tottenham .. ..	..	..	100	..	..
Twickenham	1	1	99	2,904	2,358
Uxbridge .. ..	..	..	..	..	..
Wealdstone .. ..	..	..	..	..	..
Wembley .. ..	..	..	99	400	30
Willesden .. ..	..	4	100	..	..
Wood Green .. ..	..	..	..	..	..
<i>Rural.</i>					
Hendon	8	1	..	..	..
South Mimms .. ..	..	..	..	..	..
Staines	165	18	..	..	..
Uxbridge .. ..	..	17	23	..	..

* No system of sewers.

† Storm water sewers.

SANITARY WORK, 1904.

Disinfection.			Dust,		Dampness,	
Rooms Fumigated.	Rooms Stripped and Cleansed.	Articles Disinfected or Destroyed.	Periodical frequency of Dust Removal.	Number of Complaints of Non-removal received.	Roofs Repaired, &c.	Guttering and Rain-pipes Repaired, &c.
232	..	35 tons 16 cwt.	weekly	..	68	132
93	51	791	..	..	46	62
149	53	7	weekly	153	96	63
227	25	4,630	do.	41	29	18
555	147	6,085	do.	44	98	170
187	52	1,730	‡	54	192	150
7	3	..	weekly	..	..	..
266	27	276	do.	..	94	78
..
10	..	85	..	..	12	10
221	82	54	weekly	7	24	48
6	..	..	do.	7	3	..
39	27	413	do.	2	31	54
76	3	1 231	do.	5	64	41
135	31	..	do.	9	7	4
217	..	4 340	fortnightly	23	79	149
346	30	9,222	§	..	36	35
..
164	7	..	weekly	..	8	..
163	127	36	do.	5	38	49
4	4	..	do.	..	..	..
115	115	2	do.	7	5	7
42	14	..	daily	..	36	52
1,089	467	8,082	weekly	771	388	162
64	23	..	do.	126	139	84
..
83	9	5	||	23	5	4
In every case after infectious disease	..	All necessary articles	always every 10 and every 7 days	8	2	2
1,115	53	..	weekly	104	97	159
224	240	3,985	weekly	24	39	37
43	4	..	weekly	43	10	10
..
81	50	..	..	..	..	..
107	13	..	fortnightly	37	9	39

‡ Part weekly and part fortnightly.

§ Weekly Tenements and Flats twice a week.

|| Fortnightly and weekly during months of July, August, and September.

NAME OF SANITARY DISTRICT.	Dampness.					
	Gardens, Areas, &c., Levelled and Drained.	Yards Paved and Drained.	Surface adjoining Houses Paved.	Dry areas Provided.	Ventilation below Floor Provided.	Basements rendered Impervious.
<i>Urban.</i>						
Acton	70	..	..	13	..
Brentford	72	..	..	..	..
Chiswick	26	26	..	5	..
Ealing (<i>Borough</i>)	77	8	1	4	5
Edmonton	97	..	1	1	..
Enfield	166	..	..	70	..
Feltham
Finchley	71	..	..	28	..
Friern Barnet
Greenford
Hampton
Hampton Wick
Hanwell	2	69	1	8	1
Harrow	5	42	12	2	20	1
Hendon	2	..	..	..	..
Heston and Isleworth	78	..	..	29	1
Hornsey (<i>Borough</i>)	25	87	46	11	56	13
Kingsbury
Southall-Norwood
Southgate	76	2	..	45	2
Staines	1	..	..	..	..
Sunbury	3	..	..	..	..	..
Teddington
Tottenham	257	..	261	174	..
Twickenham	78	..	..	16	..
Uxbridge
Wealdstone	4	3	2	2	1
Wembley	2	2	..	1	..
Willesden	74	164	121	15	39	8
Wood Green	2	74	1	3	..
<i>Rural.</i>						
Hendon	9	..	..	1	13
South Mimms
Staines
Uxbridge	56	56	..	..	..

SANITARY WORK, 1904.

Sundry Nuisances Abated.					
Overcrowding.	Smoke.	Accumulations of Refuse.	Foul Ditches, Ponds, Etc., and Stagnant Water.	Foul Pigs and other Animals.	Other Nuisances.
10	1	34	..	22	..
6	25	45	..	7	..
9	..	23	..	53	..
7	2	36	1	32	65
22	11	11	1	16	349
16	10	55	2	30	37
..	..	2	..	5	41
1	..	10	3	11	..
..
3	..	25	6	3	11
8	1	34	2	19	46
..
5	..	14	2	3	22
9	4	49	1	4	108
3	..	21	4	2	28
13	3	574	10	28	118
9	3	101	13	9	5
..
12	..	..	..	..	..
2	1	20	3	2	24
..	2	6	..	2	..
..	..	4	3	4	..
4	..	18	11	6	25
22	15	56	..	15	33
7	3	56	2	14	105
21	..	..	..	..	..
3	2	2	2	2	..
8	3	5	..	2	60
17	..	64	3	..	..
8	..	27	..	6	8
26	..	101	20	8	..
..
2	..	66	17	34	..
7	1	7	9	3	99

COUNTY OF MIDDLESEX.—
VITAL STATISTICS OF THE DISTRICTS OF

	Population estimated to Middle of Year.	Births.		Total Deaths in the	
		Number.	Rate.	Under 1 Year of Age.	
				Number.	Rate per 1,000 Births registered.
	2	3	4	5	6
<i>Urban.</i>					
Acton	52,358	1,450	27·6	207	142
Brentford	15,618	545	34·8	90	165
Chiswick	32,177	889	27·6	111	124
Ealing (<i>Borough</i>) ..	43,780	1,054	24·0	111	105
Edmonton	53,358	1,891	35·4	306	161
Enfield	49,639	1,427	28·7	226	158
Feltham	5,560	145	26·0	31	213
Finchley	25,564	634	24·8	87	137
† Friern Barnet	9,758	296	30·3	32	108
Greenford	1,092	24	21·9	2	208
Hampton	7,500	233	31·0	32	137
Hampton Wick	2,606	48	18·4	5	104
Hanwell	18,000	533	29·6	112	210
Harrow	12,313	277	22·4	30	108
* Hendon	24,449	679	27·7	96	137
Heston & Isleworth ..	32,630	1,057	32·3	179	169
Hornsey (<i>Borough</i>) ..	84,227	1,659	19·6	145	86
Kingsbury	791	12	15·1	1	76
† Southall-Norwood ..	15,737	578	36·7	85	147
Southgate	19,000	441	23·4	36	81
Staines	6,856	142	20·7	21	147
Sunbury	4,580	145	31·6	23	158
Teddington	16,000	391	24·4	52	133
Tottenham	121,279	3,578	29·5	494	138
Twickenham	26,000	723	27·8	109	150
Uxbridge	8,919	261	29·2	29	111
Wealdstone	8,940	265	33·7	30	113
Wembley	5,200	144	27·6	18	125
Willesden	134,539	4,421	32·8	487	110
Wood Green	40,930	1,161	28·3	145	125
<i>Rural.</i>					
Hendon	11,046	208	18·8	19	91
South Mimms	2,766	54	19·5	8	148
Staines	18,737	529	28·2	87	164
‡ Uxbridge	18,206	498	23·5	65	130

* Excluding non-residents in institutions.

† Excluding London County Asylums.

‡ Including Hayes and Ruislip-Northwood for whole year.

TABLE I.

THE COUNTY OF MIDDLESEX DURING 1904.

Registered District.		Total Deaths in Public Institutions in the District.	Deaths of Non-residents registered in Public Institutions in the District.	Deaths of Residents registered in Public Institutions beyond the District.	Net Deaths at all Ages belonging to the District.	
At all Ages.					Number.	Rate.
Number.	Rate.					
7	8	9	10	11	12	13
576	11.0	9	..	5	581	11.1
252	16.1	..	..	..	..	..
424	13.1	8	3	46	462	14.3
471	10.7	37	12	36	495	11.3
1,050	18.9	361	298	93	845	15.8
641	12.8	67	16	1	626	12.8
69	12.4	..	..	1	70	12.5
325	12.7	..	14	27	338	13.2
103	10.5	..	..	4	107	10.9
11	10.0	..	..	..	11	10.0
91	12.1	1	1	10	100	13.3
27	10.3	..	1	4	30	11.5
206	11.4	..	..	..	..	..
104	8.4	6	..	10	114	9.2
418	16.7	146	121	2	297	12.1
750	22.9	290	200	..	550	16.8
660	7.8	8	3	33	690	8.1
8	10.1	..	..	..	..	..
385	20.5	203	203	13	195	12.3
176	9.2	..	15	11	172	9.0
69	10.0	11	..	1	70	10.2
86	18.7	..	..	2	83	19.2
173	10.8	10	3	14	184	11.5
1,626	13.4	308	224	..	1,562	12.8
319	12.2	13	6	11	324	12.4
108	12.1	4	6	23	128	14.3
76	8.5	..	..	3	79	8.7
59	11.2	..	..	..	..	..
1,479	10.9	193	14	180	1,615	12.2
454	10.0	18	10	22	466	11.3
87	7.8	..	..	..	87	7.8
37	13.3	2	2	2	37	13.3
313	16.6	70	..	7	320	17.0
286	15.7	51	36	1	251	13.7

COUNTY OF MIDDLESEX.

CAUSES OF DEATHS RECORDED IN

				Smallpox.	Measles.	Scarlet Fever.	Whooping Cough.	Diphtheria and Membranous Croup.	Croup.
<i>Urban.</i>									
Acton .. ..	..	..	..	15	1	9	2	..	..
Brentford .. ..	..	..	..	27	..	3	2	..	..
Chiswick .. ..	..	..	..	39	5	9	6	1	..
Ealing (<i>Borough</i>) ..	..	..	..	7	4	3	1	..	..
Edmonton .. ..	..	..	..	28	3	7	10	..	..
Enfield .. ..	..	..	..	4	2	18	..	..	..
Feltham .. ..	..	..	..	5	..	2	2	..	..
Finchley .. ..	..	..	..	17	1	10	3	..	..
Friern Barnet.. ..	..	..	..	2	..	2	1	1	..
Greenford .. ..	..	..	..	..	..	..	..	..	..
Hampton .. ..	..	..	..	..	..	4	3	..	..
Hampton Wick ..	..	..	..	..	..	..	..	..	..
Hanwell .. ..	..	..	..	6	1	1	1	..	..
Harrow .. ..	..	..	..	2	..	1	..	..	..
Hendon .. ..	..	..	..	4	3	10	1	..	..
Heston and Isleworth ..	..	..	..	6	..	4	2	..	..
Hornsey (<i>Borough</i>) ..	..	..	..	18	1	17	7	..	..
Kingsbury .. ..	..	..	..	..	..	..	..	..	..
Southall-Norwood ..	..	..	..	8	3	6	2	..	..
Southgate .. ..	..	..	..	4	1	4	1	..	..
Staines .. ..	..	..	..	1	..	..	..	..	..
Sunbury .. ..	..	..	..	1	1	..	18	..	..
Teddington .. ..	..	..	..	10	..	2	2	1	..
Tottenham .. ..	..	..	1	34	7	15	23	3	..
Twickenham .. ..	..	..	..	2	1	13	2	..	..
Uxbridge .. ..	..	..	..	..	..	2	..	..	..
Wealdstone .. ..	..	..	..	..	..	1	..	..	..
Wembley .. ..	..	..	..	2	..	..	..	..	..
Willesden .. ..	..	..	..	44	2	10	19	1	..
Wood Green .. ..	..	..	..	18	2	8	17	..	..
<i>Rural.</i>									
Hendon .. ..	..	..	..	2	..	..	..	..	..
South Mimms .. ..	..	..	..	..	1	..	..	..	..
Staines .. ..	..	..	..	3	2	..	2	1	..
Uxbridge .. ..	..	..	..	4	..	1	4	2	..

The figures relating to each district are not in all cases corrected by the exclusion of death

TABLE 2.

THE DISTRICT REPORTS FOR 1904.

Fevers.			Epidemic Influenza.	Cholera.	Plague.	Diarrhoea.	Enteritis.	Puerperal Fever.	Erysipelas.
Typhus.	Enteric.	Other continued.							
..	3	..	6	..	..	82	11	3	..
..	4	..	3	..	..	36	..	..	..
..	..	..	3	..	..	15	18	2	4
..	1	..	5	..	..	53	5	..	..
..	8	..	10	..	..	151	14	..	5
..	3	..	..	..	..	122	..	3	2
..	..	..	1	..	..	3	4	..	2
..	..	..	5	..	..	13	6	2	2
..	..	..	..	..	..	6	11	1	..
..	..	..	..	..	..	2	..	..	..
..	1	..	..	..	..	9	4	..	..
..	..	..	..	..	..	1	..	..	..
..	..	..	3	..	..	35	12	1	..
..	..	1	..	..	..	5	..	..	1
..	..	..	3	..	..	26	2	1	1
..	..	2	4	..	..	68	..	1	..
..	2	..	14	..	..	24	19	1	1
..
..	..	..	..	..	..	12	14	..	1
..	..	..	5	..	..	5	..	1	..
..	..	..	1	..	..	2	..	..	1
..	..	..	1	..	..	6	2	..	..
..	..	..	..	..	..	8	1	..	1
..	7	..	15	..	..	145	43	2	3
..	2	..	9	..	..	28	2	..	..
..	..	..	1	..	..	10	..	..	..
..	..	..	2	..	..	8	1	..	..
..	..	..	1	..	..	7	..	..	..
..	8	..	14	..	..	146	31	5	6
..	1	..	7	..	..	54	..	2	2
..	..	..	3	..	..	..	..	..	..
..	..	..	2	..	..	2	..	..	1
..	1	..	4	..	..	14	22	..	5
..	..	..	1	..	..	19	..	1	..

inclusion of deaths of residents occurring outside the district, and the of non-residents.

COUNTY OF MIDDLESEX.

CAUSES OF DEATHS RECORDED IN THE

			Other Septic Diseases.	Phthisis.	Other Tubercular Diseases.	Cancer, Malignant Disease.	Bronchitis.	Pneumonia.
<i>Urban.</i>								
Acton .. ..	..	..	1	33	21	18	43	71
Brentford .. ..	..	..	.	26	4	9	21	12
Chiswick .. ..	..	..	..	34	21	28	31	49
Ealing (<i>Borough</i>) ..	..	..	3	33	7	30	44	27
Edmonton .. ..	..	..	3	71	40	30	57	67
Enfield .. ..	..	..	2	42	21	29	37	37
Feltham .. ..	..	..	..	4	4	6	2	5
Finchley .. ..	..	..	10	24	14	19	21	22
Friern Barnet .. ..	..	..	1	6	2	8	12	8
Greenford .. ..	..	..	..	1	2	1	..	..
Hampton .. ..	..	..	..	4	3	3	8	4
Hampton Wick .. ..	..	..	..	4	1	2	2	2
Hanwell .. ..	..	..	..	10	25	8	15	9
Harrow .. ..	..	..	..	10	3	13	..	1
Hendon .. ..	..	..	..	30	12	11	22	19
Heston and Isleworth	..	..	11	51	11	36	45	21
Hornsey (<i>Borough</i>) ..	..	..	..	54	23	49	66	43
Kingsbury .. ..	..	..	..	3	..	1	..	..
Southall-Norwood ..	..	..	5	12	4	4	10	22
Southgate .. ..	..	..	..	12	4	12	6	16
Staines .. ..	..	..	..	3	2	4	5	6
Sunbury .. ..	..	..	1	..	1	5	7	5
Teddington .. ..	..	..	1	16	11	16	11	10
Tottenham .. ..	..	..	1	75	68	52	89	108
Twickenham .. ..	..	..	3	16	13	20	12	19
Uxbridge .. ..	..	..	1	17	3	6	11	7
Wealdstone .. ..	..	..	..	4	..	5	2	16
Wembley .. ..	..	..	..	3	..	6	1	2
Willesden .. ..	..	..	11	141	47	111	120	128
Wood Green .. ..	..	..	3	28	16	29	38	16
<i>Rural.</i>								
Hendon .. ..	..	..	..	4	..	5	10	10
South Mimms .. ..	..	..	..	4	1	..	4	5
Staines .. ..	..	..	..	25	5	10	28	21
Uxbridge .. ..	..	..	3	20	6	18	25	17

The figures relating to each district are not in all cases corrected by the exclusion of deaths

TABLE 2—*continued.*DISTRICT REPORTS FOR 1904—*continued.*

Pleurisy.	Other Diseases of Respiratory Organs.	Alcoholism, Cirrhosis of Liver.	Venereal Diseases.	Premature Birth.	Diseases and Accidents of Parturition.	Heart Diseases.	Accidents.	Suicides.	All other causes.
1	7	3	..	20	4	45	15	4	163
..	..	1	..	3	..	22	11	1	68
1	..	6	..	14	2	29	11	3	131
5	1	6	1	19	3	45	5	5	153
5	6	7	1	31	1	45	20	2	223
2	1	6	..	25	1	44	17	3	203
..	..	..	..	3	..	5	1	1	19
1	2	10	..	12	..	33	5	1	105
1	3	1	..	4	1	10	1	1	24
..	..	..	..	..	..	3	..	1	1
..	..	1	..	5	..	8	4	..	39
..	..	..	..	1	1	3	1	..	12
1	2	5	1	24	..	10	7	1	28
..	12	1	..	9	..	1	..	..	54
..	..	7	..	17	2	26	7	3	90
2	28	6	3	18	9	38	17	3	164
1	8	15	1	24	1	64	9	5	223
..	..	1	..	..	..	..	..	..	3
..	..	1	..	20	..	15	4	..	52
..	3	2	..	4	..	17	2	1	72
..	1	1	..	4	..	7	4	..	27
..	..	..	..	1	..	3	1	..	35
..	..	1	..	9	..	16	2	..	66
1	25	12	2	75	9	129	29	4	426
..	3	6	..	15	3	29	2	3	121
1	2	5	..	6	1	9	2	..	44
..	..	2	..	4	1	8	3	2	17
..	..	2	..	3	..	5	3	1	23
1	12	26	5	80	10	118	52	13	484
2	..	5	..	28	..	28	6	1	150
..	..	1	..	5	1	5	4	..	37
..	2	..	..	..	..	3	1	..	11
..	..	4	..	7	1	17	8	1	139
1	2	8	..	9	..	30	12	1	102

inclusion of deaths of residents occurring outside the district, and the of non-residents.

COUNTY OF MIDDLESEX.—

NOTIFICATIONS OF INFECTIOUS

	Estimated population, middle 1904.	Scheduled					
		Smallpox.	Scarlet Fever.	Diphtheria.	Membranous Group.	Typhus.	
<i>Urban.</i>							
Acton	52,358	1	129	32	1	..	
Brentford	15,618	12	54	14	..	..
Chiswick	32,177	..	106	37	1	..	
Ealing (<i>Borough</i>) ..	43,780	..	177	15	..	..
Edmonton	53,358	4	181	43	2	..	
Enfield	49,699	1	140	53	1	..	
Feltham	5,560	..	7	7	..	..
Finchley	25,564	..	161	68	..	..
Friern Barnet ⁽¹⁾ ..	9,758	..	35	12	..	..
Greenford	1,092	..	1	..	..	..
Hampton	7,500	..	51	12	..	..
Hampton Wick ..	2,606	..	2	3	..	..
Hanwell	18,000	..	14	17	1	..	
Harrow	12,313	1	33	6	..	..
Hendon ⁽²⁾	24,449	2	88	19	..	..
Heston & Isleworth	32,630	..	65	37	..	..
Hornsey (<i>Borough</i>)	84,227	..	197	101	..	..
Kingsbury	791	..	2	..	..	..
Southall-Norwood ⁽¹⁾	15,737	..	156	17	2	..	
Southgate	19,000	..	91	23	..	..
Staines	6,856	..	3	6	..	..
Sunbury	4,580	..	73	107	..	..
Teddington	16,000	..	12	11	..	..
Tottenham	121,279	22	307	166	4	..	
Twickenham	26,000	..	101	30	..	..
Uxbridge	8,919	..	11	4	..	..
Wealdstone	8,940	1	22	5	..	..
Wembley	5,200	1	..	5	..	..
Willesden	134,539	12	326	351	2	..	
Wood Green	40,930	..	90	171	1	..	
<i>Rural.</i>							
Hendon	11,046	..	21	5	..	..
South Mimms	2,766	1	7	1	1	..	
Staines	18,737	1	95	26	2	..	
Uxbridge ⁽³⁾	18,206	..	69	61	..	..
The County	930,697	59	2,827	1,465	18	..	

(1) Friern Barnet, excluding population and cases occurring in London County Asylum.

Southall-Norwood, excluding population and cases occurring in London County Asylum.

(2) Excluding institutions.

(3) Including Hayes and Ruislip-Northwood for the whole year.

TABLE 3.
DISEASE, 1904.

notifiable diseases.							Other notifiable diseases.	
Enteric.	Continued Fever.	Relapsing Fever.	Puerperal Fever.	Cholera.	Erysipelas.	Total.	Measles.*	Chicken-pox.
8	4	..	24	199	..	262
30	19	129	..	58
19	3	..	43	209	..	112
5	2	..	33	232	..	..
38	1	..	74	343	..	..
16	5	..	28	244	..	..
2	8	24	..	..
4	2	..	30	265	..	..
2	1	..	7	57	..	..
..	1	2	..	..
2	3	68	299*	..
..	5	..	..
1	1	..	15	49	..	73
1	1	..	4	46	..	7
8	7	124	..	..
15	5	..	23	145	..	..
16	5	..	40	359	..	..
..	2	..	..
9	16	200	..	..
5	1	..	22	142	..	..
1	10	..	..
3	7	190	..	..
8	1	..	8	40	..	..
39	1	..	9	..	65	613	..	..
7	2	..	8	148	..	..
..	1	..	5	21	..	85
..	5	33	..	4
1	8	15	..	..
38	5	..	73	807	..	..
9	5	..	24	300	..	..
2	6	34	..	..
1	5	16	..	2
10	1	..	28	163	..	..
2	1	..	22	155
302	1	..	56	..	661	5,389	299	603

* Measles is compulsorily notifiable in Hampton.

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